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OPHTHALMOLOGY'S POSTWAR RESPONSIBILITIES AND OPPORTUNITIES

Chairman's Address

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The war has brought about many alterations in our outlook and our way of living. During the conflict many changes were made to assist the war effort, and while these were considered temporary measures there can be no doubt of the fact that there will be no returning to the American way of life as we knew it before the war. We have seen that with the cessation of hostilities we must face the problem of readjustment and rehabilitation. To American ophthalmology this means, among other things, that we must assume the responsibility of developing greater training facilities for the returning veteran. Based on observations made as a consultant to the Surgeon General of the Army, it has been apparent to me that in the past a certain amount of our postgraduate teaching has left much to be desired. We know now that plans for the future must provide better postgraduate teaching, and this training must be made available to a greater number of men.

We must also take cognizance of the fact that by making postgraduate study available to Central and South Americans the war has given us the opportunity of bringing about a better understanding among the ophthalmologists of the Western Hemisphere.

The postgraduate teaching of ophthalmology has progressed a great deal in this country during the last twenty-five years. Before this time the number of residencies or house officer appointments available for those training in ophthalmology were very limited. The majority of men seeking instruction in this specialty turned to Europe, especially Vienna, where a real effort was made to offer postgraduate courses to foreigners, particularly American students.

It was not long before a well organized plan for postgraduate study in Vienna was developed. On arrival the student registered at the American Medical Association of Vienna, which in the latter days had its headquarters in Alser Strasse on the second floor over the Café Edison. Here was a place to which mail could be sent, where checks could be cashed, money exchanged, and meals obtained. This association also served as a common meeting place for all Americans studying in Vienna. Its main function, however, was to assist the foreigner in planning the program of courses he wished to attend. As soon as a sufficient number of students requested a given course the A. M. A. made the arrangements with the instructor, paying, on the average, $5 an hour for the instruction. This cost was met by dividing the cost of the entire course among those participating. If the newly arrived student indicated his interest in ophthalmology, he was immediately signed up in the courses in ophthalmology that were being organized at the time. Consequently the student frequently found that he was taking advanced subjects before he had obtained the necessary basic instruction in anatomy, physiology, optics and pathology. In addition to the didactic lectures the students could arrange for periods of clinical demonstrations in one of the clinics. These demonstrations were conducted by one of the assistants in the clinic and always gave the student the opportunity of examining the patient. At the end of six or more months the student received a certificate signed by all the instructors from whom he had taken courses, but as this was given without examination the student had no way of evaluating his training. Too frequently this period of postgraduate education was limited to six months, although a fair number did remain for one or two years. Those of the latter group attended a great variety of lectures, obtained a sound knowledge of pathology and saw many patients, so that by the completion of their Vienna training they had a solid workable background of practical experience.

Most of the actual teaching was done by the clinical assistants. In order to survive the Viennese system it became expedient for these men to earn additional funds during the five to six years that they worked in the clinic by giving courses to foreign students. The assistants in the clinic had to be able to speak good English and had to be excellent teachers if they were to receive requests for their courses. And on the whole the instructors were excellent. But the student who derived the greatest benefit from this form of postgraduate education was he who had had at least one year of training in his specialty before going abroad. He could then choose his courses intelligently, and his previous background in the specialty helped him to make the most of the material that Vienna offered. In addition there were a few very fortunate individuals who because of certain circumstances had the opportunity of working for a year or more as a regular assistant in the clinic of Ernst Fuchs, Dimmer or Meller. On the whole the training offered was better than that available to the

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average student in this country. Training facilities in other parts of Europe and England were comparable to those of Vienna.

American ophthalmology, aided by the knowledge and experience gained on the continent and in England, has developed its own system of postgraduate training through the serving of residencies. This work began when ophthalmology became divorced from otolaryngology and the chair of ophthalmology became a separate entity. The institution of formalized training, however, can be dated by the advent of the American Board of Ophthalmology in 1916. Under its influence progress has been continuous and has resulted in carefully planned and well organized training. The American board examinations have demonstrated that the men trained in this country are better prepared than those who received their training by the European method just outlined. It is also noteworthy that along with the advancement of our training facilities we have developed and improved our research laboratories and their personnel. At the recent meetings of the Association for Research in Ophthalmology these young Americans have presented excellent papers based on their original work. Training facilities in ophthalmology, however, are still inadequate.

A three or four year residency in a well established division of ophthalmology in one of the large university medical schools is probably the ideal way of obtaining training in ophthalmology. Here, as part of the training, the basic sciences are taught by lecture and laboratory work. Here also are opportunities for work in the anatomy, special pathology, bacteriology and research laboratories. The unusual library facilities also encourage study of the rare and most recently reported conditions. Association with the teachers of other branches of medicine tends to broaden the outlook and increase the knowledge of the relationship of ophthalmology to other branches of medicine. The number of residencies of this group is small, so that unfortunately these opportunities are limited. From this small, well trained group must come our teachers, research men, pathologists and consultants. It is from this group that the teachers of the basic courses of shorter duration must also be obtained.

As already stated, the number of these regular residencies is entirely inadequate and not sufficient to fill the needs of the specialty. There are, however, many hospitals away from medical school centers that have competent clinical ophthalmologists who could teach good clinical ophthalmology. But these men often have neither the time, inclination, background nor proper facilities to teach the basic sciences. These institutions, however, could be desirable locations for the training of residents. For residents in such appointments the basic science course as given by several institutions is not only advisable but essential in the development of a "safe ophthalmologist." In these six to eight months' courses the time is devoted to lectures and to laboratory and clinical demonstrations. Thus in a relatively short time the foundation is laid for the future development of a dependable ophthalmologist. From personal observation it is apparent that the men who have followed up such a course with a year or two of institutional or clinical work have done very well. It should be pointed out that this year of basic training must be followed by carefully supervised clinical work.

Unfortunately, because of the facilities required for such courses the number of places available in these established courses is limited and not sufficient to fill the needs. From the foregoing it is apparent that other facilities must be provided to make available to more men the proper teaching in the basic sciences of ophthalmology, which while not ideal would train them sufficiently well to quality them for their American Board of Ophthalmology examinations; in other words, qualify them to be "safe ophthalmologists."

The method of training suggested by Gradle, although approximating the ideal less than those mentioned before, warrants serious consideration. Gradle thought that a three to six months concentrated course in the basic sciences should be given in medical schools immediately following the general intern year, and he felt that the clinical residencies should follow this course. This would permit the future resident to devote three to six months to concentrated study without the care and responsibilities of a clinic—a great help if the resident had an appointment in an institution where one resident must shoulder the entire responsibility of the resident's work. In addition the basic course would give him sufficient foundation to be of some help to the institution from the start. This plan would also have the tendency to encourage more institutions to assume the responsibility for the clinical training of men. It would seem advisable for a committee, perhaps representing the three major eye societies, to work out a uniform course of instruction that would cover the essential subjects and outline the methods of teaching to be used.

Training can also be obtained through preceptorship and association in private practice with a well qualified and well trained ophthalmologist. Here, especially, it is essential that the individual obtain his basic course before starting in practice, as the pressure of private practice is not conducive to theoretical instruction from the preceptor. However, if the young ophthalmologist has had the basic course and has followed it up with carefully planned reading, such as the Home Study Course of the American Academy of Ophthalmology and Otolaryngology, he can then be assured proper guidance in training. But it will take much longer in a preceptorship than in a residency to cover the same amount of ground.

With the sudden release of so many physicians from the armed forces, the number of men who wish to enter ophthalmology has overwhelmed the existing facilities. This fact emphasizes the necessity of more medical schools instituting basic courses as a precursor of residency in ophthalmology. The establishment of the new veterans' training program for residencies will be of some help but will not be sufficient to meet the needs. As an emergency measure to aid those who were unable for various reasons to secure a place in one of the established courses the Ophthalmological Study Council, under the direction of Dr. Walter Lancaster, conducted a course primarily for ex-service men. This course was given to "furnish the preparation indispensable to profitable clinical experience" for those unable to obtain the basic training.

The war has caused the disruption, disorganization and in many instances the utter destruction of the teaching facilities for postgraduate instruction abroad. Thus we not only have the responsibility of teaching our own men but we also have the responsibility of making this

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training available to those Central and South Americans who would desire training in this country.

In the past the Central and South Americans in the specialty have, for the most part, studied in Europe. This has resulted in their adoption of European methods and European equipment. At the present time we have the opportunity of establishing a very much better understanding between the ophthalmologists of the Western Hemisphere by making available to them the opportunities for postgraduate study disrupted by the war.

During the past few years the Kellogg Foundation has made it possible for some carefully chosen young men from Central and South America to come to this country for a training period of one to three years. I have had the opportunity of observing some of these men throughout their training and have been able to discuss with others the reactions of their experience while in this country. Those who have been given training comparable to that given our residents have been delighted. They have learned that, while our brusk ways are different from their own, we do respect them and attempt to understand their problems. During their stay among us we have learned to respect them and more particularly their undergraduate training. When they have gone back to their native lands they have been better ambassadors of good will than many others we could have sent them.

The establishment of the Pan American Association of Ophthalmology is another step in the same direction, and it is already developing better cooperation among the Pan American ophthalmologists by helping to solve many of our mutual problems.

To meet properly the requirements for postgraduate study for Central and South Americans, two types of training facilities should be available. There should be a number of three year residencies for the training of young men just finishing their intern year and who have had no previous training in ophthalmology, aside from that obtained in medical school. These men should be carefully chosen, perhaps by using the method now employed in awarding the Kellogg Foundation fellowships.

In addition there is also need for another type of instruction, namely that for the man who has been in practice for a number of years and who wishes instruction in certain subjects or who wishes a "refresher course" of several months. The number of current inquiries about such a course has made it apparent that there is a definite need for this type of instruction. The courses would have to be given, at least in part, in Spanish, for although the men sent here for the Kellogg Foundation fellowships are presumed to have a practical knowledge of English, experience has shown that it requires about three months for them to overcome the language difficulty. From this it is apparent that some Spanish speaking instructors would be necessary.

The following plan would seem to comply with the previous requirements: One or more eye institutes should be attached to well established medical schools where adequate clinical material is available. These institutes should be under the direction of the professor of ophthalmology of the particular medical school. As most universities do not have available funds for such innovations, part of the money for the establishment and maintenance of the institute would have to come from some outside source.

Training facilities should be provided for two or three year residencies for men who, as stated, have just finished their medical training. These foreign students should have a speaking knowledge of English so that they can receive their instruction in the basic sciences with the residents of the medical school to which they are attached. The institute should have facilities for training of both American and Spanish speaking residents so that the younger men from Central and South America can receive their training with, or in association with, our own men and thus afford them the opportunity of becoming well acquainted with Americans and the American methods of practicing ophthalmology. The friendships made while serving a residency are usually lasting ones. Most of us have close friends whom we met during our postgraduate training. Thus we can assume that many of these Pan American friendships will be lasting and will tend to improve mutual relations.

In addition, courses should be available that can be given at any time on the request of visiting foreign ophthalmologists. The plan for arranging these courses could, in general, follow the method employed in Vienna, with the exception that these courses will be limited to individuals who can give evidence of at least one year's training in the specialty. It would be necessary for the institute to have an executive staff that includes at least one Spanish speaking secretary. There should also be at least one Spanish speaking ophthalmologist on the attending staff who can devote half his time to the Spanish speaking students. Some of the teaching could even be done by the third year Spanish speaking residents. Other opportunities could also be made available for those visiting ophthalmologists who are adept in the English language. Like Vienna, a modest fee charged for these courses could be payable to those residents who assist with the instruction.

The bitter national experience that we have just been through has shown, at least to some extent, that our national and economic future is dependent on the development and maintenance of a mutual understanding and solidarity between the countries of the Western Hemisphere.

Thus from the plan outlined we could not only bring about a better understanding of the ophthalmologists of the Western Hemisphere but we would also contribute to a better national understanding and mutual respect. It would be of more value to the "good neighbor" policy than a dozen so-called good will ambassadors sent to these countries on a "hurried" good will tour.

Thus, in the postwar years ahead, American ophthalmology has both responsibilities and opportunities. Foremost in my mind are the responsibilities of making available to our own men, especially our veterans, better and more adequate facilities for the proper postgraduate study and training in the specialty of ophthalmology. We also have the golden opportunity of bringing about a better understanding among the ophthalmologists of the Western Hemisphere by giving the Central and South Americans opportunities for postgraduate study.

May we not fail.

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DYNAMIC POSTURE

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Posture has long been thought of in terms of standing and sitting, and correct posture as the erect position assumed when one is under inspection, but posture should really be considered as the sum total of the positions and movements of the body throughout the day and throughout life. It should include not only the fundamental static positions in lying, sitting and standing and the variations of these positions but also the dynamic postures of the body in motion or in action, for it is here that posture becomes most important and most effective. Posture has a direct relation to the comfort, mechanical efficiency and physiologic functioning of the individual.

DEVELOPMENT OF POSTURE

The Baby's Posture.—The posture of the newborn baby is quite different from that of the adult or even that of the older child. The whole spine and trunk as well as the hips, knees and ankles are flexed, resembling the animal position on all fours more than the erect adult position (fig. 1 *A*). The newborn infant is unable to support its head or trunk. The thighs are flexed against the abdomen and the legs against the thighs. The legs are slightly bowed and twisted inward. The feet are up against the legs or turned inward and have no arches. The shoulders and elbows are usually held in flexion (fig. 1 *B*). The newborn baby makes waving movements with his arms and wrists, kicking movements with his legs and swimming movements with the whole body. Gradually during the first year of life the head is held up, an arch develops in the lumbar region, and the knees and hips straighten. The infant learns to roll over, sit, creep, stand, climb up and down and finally walk with support. Considerable balance and coordination are acquired. Walking and running develop almost simultaneously early in the second year, at first with the hips and knees slightly flexed, the legs well apart and the arms elevated for balance (fig. 1 *C-G*).

When the infant stands during this period, it should be largely on firm, flat surfaces. His shoes should not be stiff but should have strong, flat soles and should be worn only when he is much on his feet. Thus the feet are maintained in good position and the arches have a chance to develop instead of rolling out into pronation. His bed should be firm and flat, preferably with a springless mattress on a fullsized plywood board (fig. 1 *H*). He should have his own special chair, which should fit the lengths of his back and legs.

The Child's Posture.—As the child grows, standing, walking and running are perfected and approach the adult in appearance. Turning, jumping, getting up and down and climbing develop, and special skills in balance and coordination such as skating, tricycle or bicycle riding and swimming may be attained. Movements in the preschool years become more purposeful and more effective and often attain considerable smoothness and grace. Formal sports, especially the ball games, come into use during the school years. However, the child's movements often become more restrained by the conventions of sport and society.

This study has been greatly aided by the use of motion pictures, including close-ups and sequences in slow motion. Some of these were shown at the recent session of the American Medical Association in San Francisco.

As the child becomes an adult his physical activities usually become quite limited because of occupation or convention and also in many cases from fatigue, laziness or lack of interest.

STATIC POSTURE

Static posture is inactive posture, or posture at rest without anticipated action. It includes the standard positions for lying, sitting and standing, and the variations of these positions, relaxed or under tension.

The Lying Posture.—Lying may be considered the fundamental human posture, since it usually occupies more hours of the day, and the position is more easily assumed than any other. However, it has many variations. One may lie on the face or back; in both cases the position is fundamentally the same with the body extended and the legs rolled inward or outward (fig. 2 *A, C*). On the side the hips and knees are usually flexed and the shoulders brought forward (fig. 2 *B*). The spine may also be flexed. Whatever the general body position, the forearm may be flexed and the

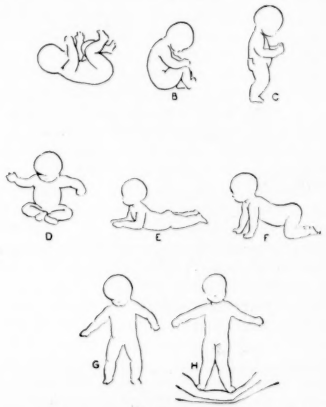

Fig. 1.—Baby's posture: *A*, posture of newborn baby: neck, trunk, and joints of arms and legs flexed; waving and kicking movement. *B*, sitting posture of young baby: similar to foregoing; unable to support head or trunk. *C*, standing posture of baby: hips and knees slightly flexed, legs separated, arms flexed, head fairly erect; slight arch in lumbar spine. *D*, sitting posture of baby: arms flexed or abducted; hips flexed, abducted and externally rotated; knees flexed, a position difficult or impossible for the adult. *E*, prone posture of young baby: gastropodal, head and thorax supported on elbows, unable to support lower trunk and pelvis with legs. *F*, creeping posture of baby: shoulders flexed, elbows extended, wrists hyperextended; hips and knees flexed; trunk and abdomen sagging. *G*, walking posture of baby: legs apart, steps quick, arms abducted for balance, elbows flexed. *H*, standing posture on soft mattress: tendency to knock knees and pronation of feet because of sagging mattress; mattress and springs should be firm and flat.

shoulder abducted or rotated inward. A pillow is advisable to keep the head level with the trunk when one is lying on the side (fig. 2 *I, J*); it is optional when lying on the back (fig. 2 *K*) and is undesirable when lying face downward (fig. 2 *L*). The positions of the extremities are changed frequently during sleep, and the body is usually turned at intervals. The lying position should in any case be one of ease and comfort, permitting complete relaxation.

A sagging bed allows the muscles and ligaments of the upper part of the body to relax but stretches those on the opposite side and tends to distort the abdominal organs and chest. All innerspring mattresses and most

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bed springs have an undesirable amount of sag, especially with a heavy occupant or two, and many of them bound like a rocking horse when one moves (fig. 2 *D, F*). A hammock sags crosswise as well as lengthwise and is worse (fig. 2 *H*). The best mattress from the standpoint of posture is one of felted cotton, hair or both, or of sponge rubber thick enough for comfort. Box springs are desirable, but it is usually preferable to place a piece of plywood or board the size of the bed between mattress and bed springs. This permits a certain amount of springiness without sagging (fig. 2 *A-C*).

The Sitting Posture.—The sitting posture is of next importance to most people because of the large number of hours many of them spend sitting and because of the bad effects of poor sitting posture. The basic sitting position should be with the trunk and head erect and centered over the pelvis or tilted slightly forward, with a medium or slight lumbar arch and with the hips and knees flexed at a right angle. (fig. 3 *A*). Like lying, the sitting position is subject to considerable variation, depending both on the person and on the chair in which he sits.

The ideal chair is of the dining room or office type, with arms erect and firm. The seat height should be equal to the length of the legs from bottom of heel to back of knee (fig. 3 *A*). A higher chair causes the legs to dangle and the spine and trunk to slump, with uncomfortable pressure back of the knees and even numbness and tingling due to pressure on the sciatic nerve (fig. 3 *B*). A lower chair concentrates the weight on the buttocks and causes slumping of the lumbar spine (fig. 3 *C*). The depth of the seat from back to front should be equal to the length of the thigh from the buttocks to the back of the knee. A lesser depth of seat gives insufficient support to the thighs (fig. 3 *C*). A greater depth requires slumping of the lumbar spine or doubling the legs up on the seat (fig. 3 *D, E*).

The back of the chair should be smooth and fairly flat crosswise but shaped to the normal vertical curve of the back. Ridges caused by the upright or crossbars are apt to be uncomfortable. The crossbar of the low back chair should fit comfortably against the small of the back. Round back chairs such as the Windsor or opera type are undesirable, since they cause the shoulders and chest to droop (fig. 3 *F-P*).

The large low armchairs frequently seen in living rooms are soft and inviting but usually fit very poorly. It is hard to get into and out of them. The seats are too low and too deep and almost invariably cause a slumped or doubled up position, particularly of shorter persons (fig. 3 *D, E*). Some of the modern sofas are similarly constructed. A chair built for repose may be made for a semi-reclining position, but the seat depth should be proper, and usually there should be support for the feet and legs.

The desk of the usual type contributes to poor posture. Its horizontal plane generally requires stooping of the spine, shoulders and head, resulting in tension and fatigue of the back of the neck and shoulder girdles. Often the desk is too high or too low, increasing the tendency to stooping (fig. 4 *A*). The desk top should be tilted toward the occupant sufficiently for him to read or write comfortably with his head and spine erect and shoulders back (fig. 4 *B*). Frequently the lighting is bad, further increasing the tendency to poor posture. Lamps placed at the back or side of the desk are rarely satisfactory. The light should be overhead, just in front of the head, bright enough but without glare or reflections. These things are especially important to the person who sits at the same desk for hours or days at a time. He may obtain some relief by frequent changes of position, getting up and down, moving and stretching his neck, back and arms.

Sitting on the floor or in bed is usually awkward and tiring to those accustomed to sitting in chairs. Sitting with the legs extended is usually uncomfortable because of tension in the hamstring muscles requiring flexion of the lumbar spine and support with the arms (fig. 4 *C, D*). Otherwise the sitter flexes his legs and turns them to the side, causing a lateral curve of the spine and requiring support with one arm (fig. 4 *E*); or both legs may be flexed, abducted and rotated externally, usually with some flexion of the lumbar spine. (fig. 4 *F*). This is probably the most comfortable of the sitting positions and least harmful to the posture of the average person.

The Standing Posture.—The standing position may best be thought of as a basic position from which constant changes are made rather than as a position

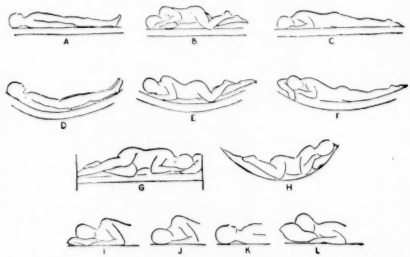

Fig. 2.—Lying posture: *A*, flat bed, supine: usual position with trunk straight, arms at side, legs extended and rotated externally; forearm may lie across abdomen or chest, or arm may be abducted and rotated internally, or hand placed above head; similar to standing position. *B*, flat bed, on side: usual position with trunk nearly straight and joints of all extremities flexed; upper arm may rest on the side and the thigh; similar to fetal position. *C*, flat bed, prone: usual position with trunk straight and legs extended and rotated externally or internally; arms may rest at side or be flexed. *D*, sagging bed, supine: trunk and neck flexed, chest and abdomen compressed, knees hyperextended. *E*, sagging bed, on side: trunk sags, stretching one side, compressing the other; trunk also tends to hyperextension or flexion; knees tend to be pulled up toward chest. *F*, sagging bed, prone: neck, trunk and hips hyperextended (swayback), feet in equinus. *G*, flat bed, too short (Pullman berth), on side: trunk, neck, hips and knees flexed, abdomen and chest compressed. *H*, hammock, on side: lateral curve of spine and trunk. *I*, pillow, on side: levels head. *J*, on side, no pillow: neck and head sag to level of lower shoulder. *K*, on back: pillow not necessary. *L*, on face: pillow undesirable; hyperextends neck.

continuously held. This basic position has certain ideal characteristics (fig. 5 *A, H*). The body should be vertical and essentially straight when seen from the side as well as from the back. The vertical line should pass through the ear, shoulder, center of the hip and ankle when seen from the side; physiologic thoracic and lumbar spinal curves should be slight and the pelvis erect rather than tilted forward. The feet and knees should be directed forward, and the arches should not sag. The chest should be erect but not fully expanded or tense, the abdomen flat and relaxed, neither sagging nor retracted. The common admonition "throw back your shoulders" is a poor and ineffective approach to good posture. "Suck in your stomach and throw out

your chest" usually results in a tense, rigid, tiring posture which may be as bad as the posture it is intended to correct. The shoulders should rest comfortably on the chest rather than be held rigidly back with the arms turned outward. The position should be maintained with the spine rather than the shoulders. The body should achieve its full height in this position, with the head and chin level, not tilted back. There should be a feeling of tallness, with the top of the head pulling away from the soles of the feet.

The weight should be slightly more on the heels, although in the dynamic position of expected forward movement the weight should shift toward the toes. Shifting the weight backward or forward alters the reflex effect on the muscles, and for simple standing the best reflex muscle tones are attained in the former position, whereas for anticipated movement the tones

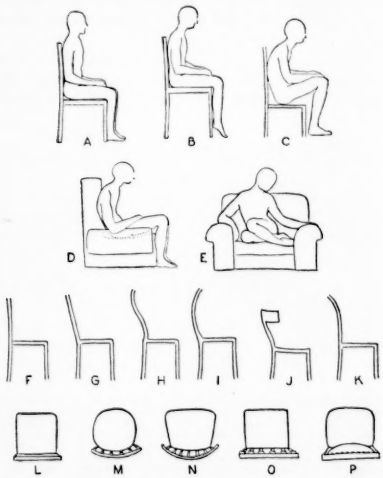

Fig. 3.—Sitting posture: *A*, erect position, correct chair which fits the length of the thighs and legs; spine and trunk erect and in balance centered over hips; weight distributed evenly on the entire thigh and sole of the foot; an armchair of this type is even better, as it supports the arms. *B*, chair too high: feet dangle, too much pressure on thigh just above knee; tendency for trunk to slump. *C*, chair too low and shallow: weight, concentrated on buttocks, may cause coccygodynia; trunk slumped, chest and abdomen compressed. *D*, chair too low and deep: weight on buttocks and sacral region; trunk slumped. *E*, chair too low and deep: legs drawn up beneath thighs, trunk and spine curved and twisted. *F*, straight chair: common type, erect and square; fairly satisfactory, but contours do not fit thighs and back, and usually too shallow, often too low. *G*, similar to *F* with back tilted; usually more comfortable, but some tendency to slide down in seat. *H-K*, chairs with various back contours sometimes for decoration, sometimes intended to fit average backs but often grossly misfitting people of different sizes; type *I* especially bad; type *J* often very uncomfortable if crossbar fits badly. *L*, view of *F* from above. *M*, chair with rounded back causing shoulders to slump forward, rounded seat causing uncomfortable pressure on thighs at edge; rungs uncomfortable to back. *N*, back similar to *M* but worse; seat better. *O*, chair with very uncomfortable upright bars projecting into back. *P*, chair with rounded upholstered back; tends to throw shoulders back and hyperextend spine.

are better with the weight forward. Better lateral balance can be secured by separating the feet and legs. With the feet together the adductor muscles are relaxed and the abductors are active. When the feet are separated farther than the hips, the adductor muscles become active and the abductors relax.

The basic standing position is varied constantly during standing, for comfort, for the many social usages and for purposeful movements. The weight may be shifted from one leg to the other, or backward or forward, allowing stretched or tense muscles or ligaments to relax. Similarly, various portions of the body may be shifted slightly. The body in motion tires less easily than the tense and rigid body. Even the soldier spends little of his time rigidly at attention (fig. 5 *C*) and he may faint if required to remain so for long because of the relatively static condition of the circulation and the accumulation of blood in the vessels of the lower extremities. Good posture should be one of comfort, requiring little effort and no tension. It is a matter of learning to control the position of the body and to bring its various parts easily into line and balance without tension or rigidity.

Individual Types.—Certain individuals are "tense," with overactive (hypertonic) muscles, causing abnormal pulls by the stronger and more tense muscles, affecting not only posture but performance. Others are "muscle bound," with short, strong muscles and ligaments which cannot be fully stretched out, also affecting posture and performance. Still others are "relaxed" because of hypotonic muscles and elongated ligaments with joints which extend too far. "Weak arches" and knock knees are a common manifestation of such relaxation. Structural abnormalities such as bow legs (fig. 5 *J*), knock knees (fig. 5 *I*), torsion, wry necks, stooped backs, curvatures of the spine, and weak lumbosacral joints may affect posture. Occasionally diseases and injuries of the spine may be responsible for poor posture, e. g. tuberculosis, fracture, Paget's disease, senile osteoporosis, arthritis, tumors and congenital deformities such as hemivertebra.

POOR POSTURE

Poor sitting posture is characterized by a drooping of the spine and trunk, with the lumbar and thoracic spine flexed, the pelvis tilted back, the abdomen and chest flattened and compressed, and the shoulders and head forward (fig. 3 *C*, fig. 4 *A*).

Poor standing posture is characterized by a forward movement and tilt of the pelvis, with an increased lumbar lordosis and thoracic round back (fig. 5 *B*). The knees flex, the abdomen sags and protrudes, the chest flattens, and the shoulders, head and neck are advanced. The height is diminished, and the body as seen from the side forms a long S curve. It is as though man having attained the erect posture in the process of evolution is now going beyond it and beginning to sag in the opposite direction.

Causes of Poor Posture.—Certain things tend to prevent good posture: Fatigue, lack of sleep, malnutrition or mental depression causes drooping, and the pelvis shifts and tilts forward, the abdomen protrudes and the chest flattens. The corpulent abdomen throws the body off balance and the upper part of the trunk and the head are thrown back to maintain balance, resulting in a swayback posture and back strain (fig. 5 *D*). Late pregnancy has a similar effect (fig. 5 *E*). Large unsupported breasts may cause drooping of the shoulders (fig. 5 *G*). The tall person may stoop to reduce his height to that of his neighbors or to fit his clothes, doorways (fig. 5 *K*), stairs (fig. 5 *L*), furniture and Pullman berths (fig. 2 *G*). Clothes which are too small or too tight also tend to cause imbalanced

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posture. High heels tend to throw the weight forward; this effect must be counterbalanced by swaying the back or flexing the knees and hips (fig. 5 *F*); either of these compensations is apt to be uncomfortable and fatiguing. Certain occupations, such as desk work, favor poor posture, especially when long hours are spent in one position and the desk and chair are not satisfactory (fig. 4 *A*).

Effects of Poor Posture.—Poor posture (fig. 5 *B*) is assumed because it is the easiest and most natural position for the person at the moment he assumes it, and it provides relaxation and rest for certain muscles and for the body as a whole. It is continuous or habitual bad posture, however, which is really harmful. Bad posture overstretches some of the muscles and ligaments, relaxes others and allows the stronger or shortened ones to contract further, increasing the bad effect, e. g. the calf muscles shorten when high heels are worn (fig. 5 *F*). Poor posture reduces the circulation locally and generally, perhaps serving a temporarily useful purpose during relaxation but, if continued, diminishing the metabolism and efficiency of the cells and tissues, inducing sluggishness and drowsiness. Breathing is shallow, with reduced oxygen available for the tissues. The abdominal organs sag (ptosis) and perform poorly, often with discomfort, resulting in constipation and headache. The physical and mental attitude is one of depression and sluggishness. Backache, leg and foot pain and fatigue are frequent symptoms of bad posture, and consequently stooping, heavy work and participation in sports are frequently avoided. Lastly, clothes fit poorly when the posture is bad, and the general appearance of the individual is distasteful to others.

Posture Correction.—A competent medical examination of the patient as well as his posture is a necessary prelude to proper treatment. Roentgenograms, especially of the spine, may be desirable for locating one of the underlying causes of bad posture. Physiologic conditions, such as faulty nutrition and hygiene, and lack of sleep, fresh air and sunlight should be corrected. The extrinsic factors, such as the bed, chair, desk and lighting, and shoes and clothing should be corrected. Infection in teeth or tonsils and constipation should be cleared up. Abnormalities of the feet, legs and spine should be corrected where possible or treated if need be. Painful conditions may require preliminary massage and heat. Tense or muscle bound persons must be taught to relax. The patient must understand that posture is a twenty-four hour proposition, that only he can correct it, and then only if he knows how, wishes to do it and applies himself continuously. The psychologic treatment of these persons is usually as important as the physical.

Exercises must constitute the principal direct treatment, since the muscles are the only intrinsic factor of posture controllable by the patient. Posture consciousness must become a part of the patient's life until correct habits are formed. Special exercises and posture training are the key to the situation and are fundamental to the development of proper tone, relaxation and coordination in the muscles. Exercises for developing tone and strength are given to relaxed persons, whereas the muscle bound or tense person is given stretchings or taught relaxation.

Sports are fitted into the program by prescription. Swimming should come early, as it can be done with little effort, uses the trunk as well as arm and leg muscles, and develops coordination. Esthetic dancing, tumbling and rock climbing are excellent, as well as the gymnasium bars. Wrestling and weight lifting increase tone and strength. Boxing develops the whole body if not carried to the point of injury. Ball games develop arm and leg muscles and breathing and are useful for the trunk. Rowing is good for the shoulder girdle and trunk muscles. These activities tend to improve static posture and dynamic posture as well but should be varied according to the specific needs of the individual.

DYNAMIC POSTURE

Definitions and Basic Principles.—Dynamic posture is posture in motion or in action or in preparation for action. It includes the transitions between the static positions of lying, sitting and standing and also such activities as pushing, lifting, walking, running, climbing, jumping, dancing, swimming, work and play. Dynamic posture includes the uses of the upper extremities and the trunk as well as the legs, and the relationships between the various parts of the body in action.

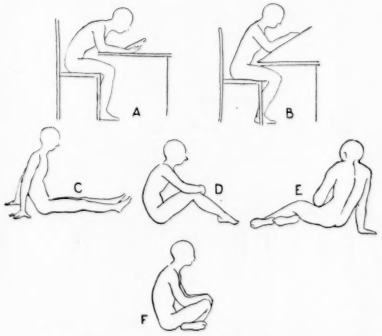

Fig. 4.—Sitting postures: *A*, ordinary flat desk or table: impossible to sit comfortably erect for reading or writing; trunk badly slumped. *B*, uptilted desk or board: good posture much easier to maintain; chief disadvantage is that objects slide off unless braced. *C*, sitting on floor, legs extended, arms usually used as props; tendency for spine to slump unless hamstrings are relaxed; very difficult to sit erect. *D*, sitting on floor, knees and hips flexed, spine slumped. *E*, sitting on floor, legs to one side, spine curved, opposite arm used as prop. *F*, sitting on floor, legs akimbo, spine slumped; it is easier to sit erect in this position than in positions *C-E*.

Children, athletes, laborers, artists and dancers apply to their special activities some phases of dynamic posture which they have discovered for themselves or been taught by their instructors or coaches. But the concept of dynamic posture as a part of posture, related to the everyday life and activity of each of us, is new and has received little or no attention in medical and orthopedic literature. The common denominators of dynamic posture are essentially the same whatever the activity. Dynamic posture should not be limited to specific sports or activities but should be understood and applied to all of our activities throughout our lives.

Good dynamic posture implies the use of the body or its parts in the simplest and most effective way, using muscle contraction and relaxation, balance, coordination, rhythm and timing as well as gravity, inertia and momentum to optimum advantage. The smooth integration of these elements of good dynamic posture

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results in neuromusculoskeletal performance which is easy, graceful, satisfying and effective and represents the best in the individual physical activity as well as in the physical activity of the individual.

Gravity pulls the body or its parts toward the earth. Inertia tends to hold the body still or to maintain its motions at a constant speed, while momentum gives the body added power or impetus. Friction, including air resistance, tends to slow the body. Gravity, inertia, momentum or friction may be overcome or reinforced by muscle action. Acceleration or deceleration may be caused by an external force, such as gravity or friction, or by the internal force of muscle action.

A muscle may contract or relax, in whole or in part. A contracting muscle may work against gravity by pulling up or lifting an object; it may aid gravity by pulling something downward. A muscle may relax and, by thus letting go, allow gravity to become more or less effective. Similarly, inertia, momentum and friction may be resisted or reinforced by the proper application of muscle contraction or relaxation. Maximum power is attained by the contraction of the muscle in the most favorable relation to gravity, inertia and momenutm, with a minimum of friction. The contraction need not be sustained but should be continued just long enough to produce the desired effect. Thus tension and fatigue are avoided, and the muscle is free to perform further work.

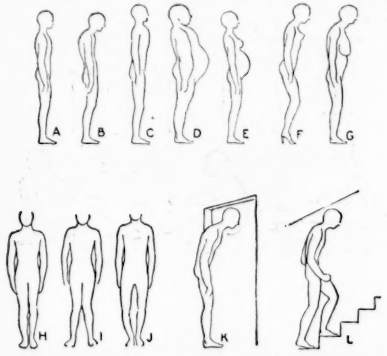

Fig. 5.—Standing postures: *A*, erect, good posture side view: head, shoulder, hip, knee, ankle in vertical alinement; chest comfortably lifted, shoulders relaxed, abdomen flat, slight lumbar curve; see *H*. *B*, poor posture, usual type: head and pelvis shifted forward, forming long S curve as viewed from side; thoracic spine stooped, chest flat or sunken, breasts sag, abdomen protrudes, pelvis tilted forward; the common posture with high heels. *C*, exaggerated erect posture, tense and tiring; head and shoulders forced back, chest forcibly raised, abdomen "sucked in," arms and legs rigid, circulation static. *D*, posture of obese person, abdomen large and protruding, throwing body out of balance forward, compensated by swaying back trunk, forming long C curve as seen from side; increased strain on lumbar spine. *E*, posture of pregnancy, similar to obesity but more transient. *F*, posture of high heels, second type, hips and knees flexed, lumbar lordosis increased, buttocks protruding; first type similar to *B*. *G*, large breasts pull upper dorsal spine, head and neck forward and flatten chest. *H*, erect posture, front view; legs straight; see *A*. *I*, posture of knock knees; feet pronated also. *J*, posture of bow legs; feet pronated for compensation. *K*, poor posture caused by low doorway. *L*, poor posture caused by low stairway.

Good balance is secured by maintaining the center of gravity of the body over the feet through coordination of the eyes, the semicircular canals and the position sense of the muscles and joints. When the body is moving forward, the center of gravity should be advanced to the balls of the feet or in front of the feet so that gravity will provide forward momentum. The trunk should lead the action rather than try to catch up with it.

Precision and smoothness are essential to good muscle action and low energy output. Timing is one of the most important and delicate phases of movement, especially of a complex one. Poor timing can reduce or invalidate the effectiveness of movement. Good timing makes the movement easier and more effective. Alternating contraction and relaxation with balanced timing produce rhythm in movement and increase the capacity for sustained action. Coordination is the smooth relationship in proper sequence of a group of muscle actions. Precision, smoothness, timing, rhythm and coordination are the elements of good dynamic posture.

The basic dynamic posture is characterized by a slight crouch, with the ankles, knees and hips flexed, the head and trunk inclined forward and the trunk slightly flexed, the arms relaxed and slightly flexed (fig. 6 *A*, *E*). With the body in this position the muscles are in a midposition with increased tone, balanced and ready for instant and powerful action in any direction. They act also as springs, absorbing shocks and initiating movement. This basic position is assumed in many sports, such as football, track, tennis and skiing (fig. 8 *B*, *C*, *E*). Fore and aft stability is increased by advancing one foot, whereas lateral stability is increased by moving the feet and legs apart sideways. Thus the feet secure a firmer grip on the ground than in the erect position, preventing slipping and increasing the thrust for forward movement. Basic dynamic posture is quite different from poor posture, previously described.

Walking.—Walking is one of our simplest and most fundamental actions and may serve as an example of dynamic posture. The body is tilted slightly forward from the basic standing position and the weight thrown on the ball of the foot, while the other thigh is lifted and the leg and opposite arm are swung forward (fig. 6 *B*). Various muscles, aided by inertia, maintain the body in balance on the ball of one foot until the opposite heel strikes, when the weight quickly advances to this leg with the knee extended (fig. 6 *C*). Momentum carries the body forward over the extended leg until it passes the perpendicular, when the thrust of the foot renews the action and the process is repeated (fig. 6 *D*).

The quadriceps muscle contracts for only a fraction of a second, with a sort of rippling movement, in swinging the leg forward. The anterior tibial and toe extensor muscles in front of the ankle contract briefly to prevent the foot from dragging just as it swings across the ground.

As the heel strikes, all the thigh and ankle muscles quickly contract to stabilize the knee and ankle until the weight is thrust forward again by the calf.

The flexor muscles of the hip swing the thigh forward. Then, as the weight goes on the leg, all the hip muscles contract to stabilize the hip, particularly those on the outer side, to prevent the pelvis from falling to the inner side. At the same time the erector spinae muscle of the opposite side contracts to hold the trunk erect. The opposite arm swings forward with the leg by contraction of the shoulder and elbow flexors, then swings back by the action of their antago-

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nists. These motions are greatly aided by the pendulum effect of the swing.

Correct walking is done with a smooth rhythm, the muscles contracting gently with a brief wavelike action and relaxing in the interval. It is characterized by free muscle and joint action, momentum, balance and rhythm. Effort becomes much greater if the speed is increased or if momentum and rhythm are disturbed.

Walking is often done badly, with the body erect and stiff, with sudden jerky movements, tense muscles, precarious balance, needless jolts and a lack of rhythm. The steps lack spring and the flexibility needed to meet unusual situations. The good walker should be able to change pace, stop, start, turn, step up or down, twist or stoop, easily and quickly, without losing balance or rhythm. A good dynamic posture and flexible healthy muscles are the basis for correct walking.

Shoes should be comfortable and of proper shape and fit. High heels and pointed toes prevent good walking. Clothing should be comfortable, not too heavy, and should allow freedom of movement. Crowded city pavements and dirty fume-laden air usually promote bad walking posture, whereas the varied topography and surfaces and the clean air of the country make good walking posture easier.

Walking may be affected by pain, weakness, stiffness or deformity, and a limp may result. Pain may be caused by an injury, such as a sprain, fracture or bruise, a blister, a corn or an inflammation such as arthritis. Weakness may be due to many things, such as lack of sleep, improper diet, illness, heat and humidity, a poor heart, lung disease or nerve or muscle damage. Stiffness may be due to muscle or joint damage, tense or contracted muscles. Deformities such as knock-knees, bow legs, short or twisted legs, club feet and high or relaxed arches have their individual effects on the gait.

Speed may be acquired by increasing the crouch and the forward tilt, thrusting harder with the legs, and a longer arm swing (fig. 6*F*). The length of stride should not be too great, as the effort of forcing the body to reach the forward leg becomes excessive, or too short, for energy is wasted in swinging the legs too many times. The same principles apply in running.

Walking uphill or upstairs may be made easier, safer and faster by leaning forward in a deeper crouch and forcing the body well forward on the higher step (fig. 6*G-I*. Breathing should be deeper rather than faster and in rhythm with the other movements. There should be no tenseness of the muscles, for this results in quick fatigue. Nor should there be any disturbance in rhythm or smoothness, as one will quickly lose rather than gain in accomplishment.

Walking downhill or down stairs also requires a forward lean and slight crouch to reduce the shock of each step as well as the chance of slipping. In this position the center of gravity is low and the muscles are in position to respond to any need (fig. 6*K-M*). The weight comes down on the whole foot, the whole step is used and the foot grips well. One can thus double up and protect oneself much easier in case of a fall. On very steep slopes or stairs a slight turning to the side or zigzagging will help. Relaxation is most important in downhill walking, especially "loose knees." The movement then becomes almost a dance, with light quick steps, or a series of slides, similar to skiing. Small jumps may often be used. The knees are usually kept close together in this technic. The crouch brings one closer to the ground with the muscles and joints acting as springs, minimizing the possibility and danger of a fall. Most falls are backward, with the body extended, in a blind direction, the weight coming hard on the coccyx or wrists. These falls can be avoided by the method mentioned.

Proper Placement of the Feet.—Normally the whole foot should be placed on the ground. Walking on the toes reduces the strain on the front thigh muscles but increases that on the calves and on the ankles. Toe walking is suitable for short distances steeply uphill on narrow trails or stairs, but usually it is better to turn the feet to the side, together or in herringbone fashion, and use the whole foot. Proper placement of the foot is important, so that it will be as nearly horizontal as possible, on a solid surface, and one which is not slippery. Usually bedrock is safer than grass, gravel, damp soil, slippery logs, snow or ice.

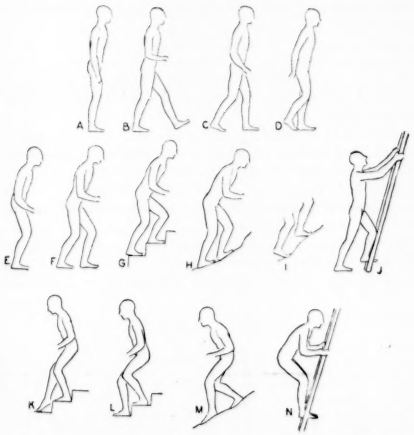

Fig. 6.—Dynamic posture: *A*, basic dynamic position for walking; slight crouch, slight flexing of hips, knees, ankles, with trunk tilted forward slightly. *B*, walking, first phase: advancing leg extended, opposite arm flexed. *C*, walking: second phase: weight shifting to forward foot, rear knee flexed slightly, leg swinging forward. *D*, walking, third phase: rear leg reaching extended front leg, arm swinging back. *E*, basic dynamic position, crouch increased for walking rapidly or on slippery surface, up or down hill. *F*, same, walking rapidly or on slippery surface. *G*, same, walking upstairs; weight mainly on forward leg. *H*, same, walking uphill; heels down, reducing effort for calf but increasing effort for quadriceps muscle; impossible with contracted calf. *I*, same, walking uphill, heels up, reducing effort for quadriceps but increasing effort for calf muscle as well as tendency to slip. *J*, climbing ladder, arms above shoulders, weight shifting to upper leg, hips and trunk well back for better vision and weight thrust; see *N*. *K*, walking down steps, first phase: moderate crouch, weight forward, one leg descending to step below, upper foot occupying whole step. *L*, walking down steps, second phase: same, but weight going on front leg on lower step; safest and most flexible position. *M*, walking down hill: moderate crouch, weight forward, entire sole on ground, reducing tendency to slip. *N*, descending ladder: position of dynamic posture; hands move down first, then trunk, finally foot; hips and trunk and head well back for better vision, weight thrust and balance.

The security of the foot may be increased by increasing the area of contact, pushing into the surface perpendicularly or pushing the side of the foot against an adjacent surface. The instep may be more secure than the ball of the foot on a rounded surface; the heel is usually least secure. The hands may be used for balance or even for assistance in pulling up steep places, but the bulk of the work should normally be

done by the legs. Facing out is usually best in climbing down, but for difficult climbing it may be preferable to face sideways or even inward toward the face of the ladder or steps (fig. 6 *J, N*).

Other Applications.—The basic dynamic position is an excellent position for many of the actions of everyday life. It may be used in various ways in the transitions from the lying to the sitting and standing positions. Arising from a chair becomes easier and more graceful when one or both feet are moved back, under or beside the chair, and the trunk is tilted forward; the movement may be reversed in sitting down (fig. 7 *A, B*). Steps and curbs are much more easily and safely ascended and descended in this position. Heavy doors can be pushed open or shut with less effort and more protection from this position (fig. 7 *C*). Lifting, especially if done with the aid of momentum, is much easier and safer; the weight should be close to the body, with the trunk erect and the lifting done with the legs (fig. 8 *F*). Falls on slippery surfaces, waxed and slippery floors and steps are nearly always backward and often result in fractures of the wrist, spine, coccyx or ankle (fig. 7 *D*). In falling backward one cannot see where one is going or double up to protect oneself. It is almost impossible to slip on a slippery surface from the crouched position because the feet grip much more firmly. Falls from this position are forward where one can see and double up for protection (fig. 7 *E*).

The basic dynamic position is often used in sports and is well known to coaches and athletes. The track runner, jumper, football player, tennis player, horseback rider, boxer and skier use it regularly, and it is frequently assumed by the gymnast and the dancer and in the course of the various ball games (fig. 8 *B-H*). Good dynamic posture may also be used by the housewife, industrial or farm worker and even by the surgeon and the nurse. It is a method

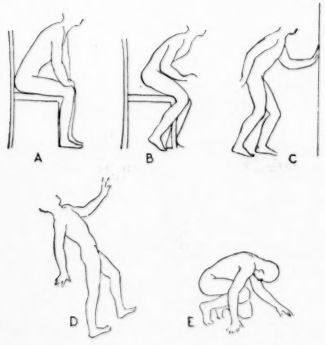

Fig. 7.—Dynamic posture: *A*, arising from chair, usual way: weight back, thrust on knees or chair with arms, requiring much effort. *B*, arising from chair, good dynamic posture: moderate crouch, feet back under chair, forward tilt of trunk; balance over feet. *C*, opening heavy door, basic dynamic position: elbow slightly flexed, little effort, as the whole body participates in the movement. *D*, falling, usual way: weight back on heels, feet slip forward, body falls back, subject unable to see where he is falling, catches on one arm, breaking wrist, or falls on buttocks, breaking coccyx or spine. *E*, falling, correct way: good dynamic position, weight forward, body drops into crouch, reducing force of fall; subject able to see, as he falls forward.

of action in which inertia, momentum, power, balance, rhythm and coordination may reach their optimum development.

Movement is the basis of dynamic posture. Good dynamic posture is common to such animals as the cat and the horse and often to children and primitive man but is uncommon in adult civilized man. Usually it is not acquired easily and instinctively but requires study and training, especially when applied to all of

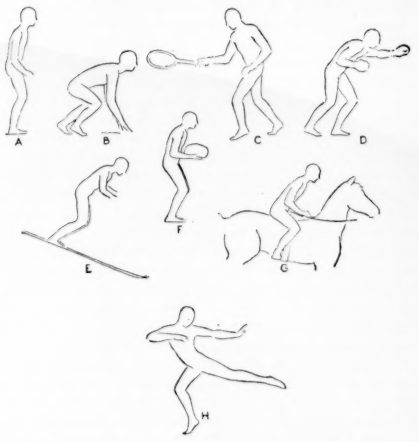

Fig. 8.—Dynamic posture: *A*, basic dynamic position: moderate crouch. *B*, basic dynamic position: crouch and forward lean as used for quick, forceful start by track runner or football player. *C*, tennis player: stroking in basic dynamic position with left leg advanced, weight forward, whole body participating in swing. *D*, boxer: basic dynamic position with forward lean and thrust with whole body as well as arm. *E*, skier: basic dynamic posture with moderate crouch and forward lean, whole body participating in movements for turning. *F*, weight lifting: basic dynamic position, arms and weight close to body, lifting done mainly by "knee action" instead of by straightening spine. *G*, horseback rider: basic dynamic position, moderate crouch; crouch intensified for high speed riding and jumping. *H*, dancer: basic dynamic position, with weight centered over one leg.

one's activities. Good dynamic posture frees one from tension and gives the body a feeling of lightness, of moving through space, rather than being earthbound. The body then becomes the instrument of the individual rather than the anchor dragging at the day's activities. The tendency to fatigue is reduced, and there is more energy left for other things. Accidents are far less common and usually less serious with good dynamic posture. The principles of good dynamic posture, precision, smoothness, power, balance, good timing, rhythm and coordination may be used not only for the physical body in action but as an approach to life.

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Fellowship in Exploration.—For young men entering a laboratory to be trained in research, there is definite advantage in a staff including not only the head of the department but also others who are experts and who can themselves direct the discipline of beginners. If these experienced associate members of the staff have interests different from those of the department head, multiple opportunities are offered for satisfying personal inclinations and diverse inquiries. In addition, there is obvious advantage to the young men in broadening and enriching their knowledge of the methods and of the progress in various endeavors, for frequent conversations and conferences assure a helpful sharing of information about what is being done.—Cannon, Walter B.: The Way of an Investigator, New York, W. W. Norton & Co., Inc., 1945.

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ENDOMETRIOSIS IN YOUTH

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Four per cent of the last 225 patients with "external" endometriosis who were seen at this clinic were less than 20 years old. Four per cent is a small figure, but there are grounds for suspecting that it is less than the true one. And it is a significant, even a large percentage when weighed against the common belief that youth does not have endometriosis.

Usually reports, including those of large series, either do not record the occurrence of the disease in youth or do record its absence. Thus, only 1 patient was less than 29 years old in Meigs's series [1] of 400 cases; the Sutton's [5] patient, aged 14, had an atresia of the hymen; Ferguson's [6] patient, aged 17, had endometriosis in the scar of a salpingectomy done eighteen months before. Of course the latter cases are not cited as instances of spontaneous endometriosis.

Seven other authors give passing mention to endometriosis in the teens. The youngest patient in Haydon's [7] series of 569 was 16 and in Von Geldern's [8] series of 100 the youngest was 19. Payne's [9] series of 307 patients includes 1 aged 18; Sanders' [10] series of 120 include 2, aged 17 and 19. Phillips' [11] collection of 29 vesical endometriomas quotes without reference 1 instance in an 18 year old, and Henricksen's [12] later similar collection of 21 cases of vesical endometriomas similarly quotes 1 instance of the disease in a 19 year

Endometriosis in the Teens: Microscopically Confirmed Cases

Case No.	Series No.	Age	Years Menstruating	Years of Symptoms	Symptoms	Endometriosal Lesions	Treatment	Other Lesions	Diagnosis by	Comment
1	152	13	3	1	Rapidly increasing dysmenorrhea	Small chocolate cyst, right ovary; red granules, blueberry spots throughout posterior vault	Excisions	No cervical occlusion; advanced secondary sex development; frequent coitus	History and vaginal examination	Positive preoperative diagnosis
2	163	17	6	0	0	Posterior vault; 1 blueberry spot, many red granules	Excision	Appendicitis	Appendectomy	Asymptomatic
3	188	18	?	?	Increasing dysmenorrhea	Blueberry spot, right ovary; several more, right posterior vault	Excisions	0	History	Preoperative diagnosis
4	123	18	6	0	0	Small chocolate cyst, each ovary; red spots + blueberry spots, posterior vault, broad ligaments	Excisions	Appendicitis	Appendectomy	Asymptomatic
5	149	18	2 ?	0	0	Small chocolate cyst, right ovary	Excision	Appendicitis	Appendectomy	Asymptomatic
6	10	19	5	6	Severe right pelvic pain; metrorrhagia	Extensive endometriosal adhesions throughout pelvis; large right chocolate cyst with perforation and hemorrhage	R. salpingo-oophorectomy; L. oophorectomy	0	Exploration for "twisted pedicle ?"	Endometriosis not considered in diagnosis; now believe this treatment too radical
7	33	19	3 ?	0	0	Two blueberry spots, sigmoid	Excisions	Large benign cystoma, left ovary	Ovarian cystectomy	Asymptomatic
8	153	19	9	3	Increasing dysmenorrhea	Rectovaginal endometrioma; blueberry spots left ovary, anterior vault	Excisions; L. salpingo-oophorectomy; suspension	Retroversion	History and rectal examination	Preoperative diagnosis
9	208	19	7	2-3	Increasing dysmenorrhea	Small chocolate cysts, right ovary (2 cm.) and left ovary, chocolate spots anterior vault; blueberry spot rectovaginal septum	Excisions; L. salpingo-oophorectomy	Appendicitis	History	Referred for acute appendicitis; endometriosis also diagnosed

youngest patient in the Mayo Clinic series [2] of 884 cases was aged 21 and Dr. Sampson himself tells me that he remembers no patient younger. Ordinarily we are advised to expect endometriosis after the age of 23, 25 or 28 or "in the thirties."

However, teen aged patients have been observed. Tuthill's [3] patient, aged 19 years, had an ovarian tumor considered to be carcinosarcoma arising in an area of endometriosis. McDonald's [4] patient, aged 16, with three endometrial cysts in the posterior vault two years after menarche, was found to have a double uterus of which only one cavity communicated with the vagina; old (the same case?). Sullivan [13] sets the age of incidence at 14 to 50 years without, however, recording the case of any teen age patient.

Could the rarity of endometriosis in youth be factitious? A few years ago endometriosis at any age was rare because the watchers for it were few. Now more

From the Fallon Clinic.

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physicians watch for endometriosis. But we do not watch for it in teen age youngsters. Counseller,[14] soon after his previously quoted report,[2] warned that we should do so when he wrote "Probably the process is initiated soon after the onset of menstruation, and it does not become of clinical importance until in the third or fourth decade when the lesions become sufficiently diffuse. We at the Mayo Clinic are convinced that in girls, in the second and third decades at least, endometriosis is in many cases responsible for pelvic pain and prolonged dysmenorrhea, although the lesions are not firm enough to palpate either vaginally or rectally."

My associates and I recently have looked for endometriosis in the teens because of two reasons. First, endometriosis is a sterilizing disease. Consequently it would be more useful to treat it in youngsters—if it occurs in youngsters—than in women old enough to have had their children. The second reason is a presumption that endometriosis should occur as early as the teens; this has been based on the observation [15] that endometriosis tends to occur after about five years of incomplete sexual function, that is, menstruation without pregnancy. In Western civilization the five years of menstrual life most likely to be thus incomplete are the first five after the onset of menstruation. And if the menarche comes at the age of 11, 12 or 13, one should begin to find endometriosis in the patient aged 17, 18 or 19.

Since it has been looked for in the teens, 9 patients have been found who have had microscopically definite endometriosis, as shown in the accompanying table.

In addition 3 other teen age patients were operated on for endometriosis which was macroscopically unmistakable but microscopically unproved. Their small lesions were destroyed by diathermy, with the removal of insufficient or no biopsy material. Endometriosis also was proved microscopically in other patients aged 20 and 21 in whom the history given and the apparent age of the lesions both suggested that the onset occurred before the age of 20. In still other girls in their teens certain lesions of the ovaries or of the pelvic peritoneum were found which we believe, but have not proved, to be early manifestations of endometriosis. Inclusion of such probable and possible cases would double the proved 4 per cent incidence in this series.

This series derives from the practice of a clinic, i. e. from a source which approximates general practice, rather than from a gynecologic service. Nor is there any unusual proportion of youthful patients in the practice. However, it is true that appendectomy in the female, young or old, customarily has been done through a median incision. And those cases which were not diagnosed before operation, as shown in the table, would not have been diagnosed at all without the visual exploration which an adequate median incision allows. Apart from good light brought into the depths of the pelvis through such an incision, there seems to be no other secret to the diagnosis of endometriosis in youth than that of remembering the possibility of its occurrence.

The symptoms (recorded in the table) of those of the patients who had symptoms at all seemed the same as those of older patients. The cardinal symptom [15] was increasing dysmenorrhea.

14. Counseller, V. S.: The Clinical Significance of Endometriosis, Am. J. Obst. & Gynec. **37**: 788-797 (May) 1939.
15. Fallon, J.; Brosnan, J. T., and Moran, W. G.: Endometriosis: 200 Cases Considered from the Viewpoint of General Practice, New England J. Med., to be published.

SUMMARY AND CONCLUSIONS

Although endometriosis is assumed to be extremely rare in youth, there were 9 of teen age among the last 225 patients with proved endometriosis who were seen in this clinic (4 per cent). The youngest was 13 years old.

It is suspected that the true incidence of endometriosis before the age of 20 years was greater than the percentage microscopically proved.

From the data obtained, the following conclusions seem valid:

1. Endometriosis should enter into the differential diagnosis of abdominal pain as soon as menstruation has been established. The cardinal symptom, as in older patients, seems to be increasing dysmenorrhea.

2. In females in whom the menstrual function has been established, whatever their age, appendectomy should be done through a median incision to allow light enough for inspection, not merely palpation, of the deep pelvis.

390 Main Street.

MULTIPLE PERTHES' TEST FOR SEGMENTAL OCCLUSION OF THE DEEP VEINS

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Before treatment of the varicose veins of the lower extremity is begun, it is of the utmost importance to determine the patency of the deep venous system. This determination is accomplished by the Perthes test. While in most cases this test will suffice, the determination of absolute and complete patency of the deep veins in the lower extremities with the Perthes test in certain cases is not only inadequate but also erroneously negative in the presence of a segmental thrombus or segmental occlusion in the deep veins.

George Clemens Perthes in 1895 illustrated the test for deep vein occlusion. He based his test on the physiologic actions of the skeletal muscles in the leg, which influence the venous circulation toward the heart. During contraction of the muscles in the leg in walking there is a compression to the deep veins, resulting in a constriction and forcing the blood to pass upward toward the heart. This is known as the systolic phase or muscular systole. During muscular relaxation the empty and collapsed deep veins fill again with blood aspirated from the superficial veins through the communicating veins. This is known as the diastolic phase or muscular diastole.

The Perthes test consists in placing a tourniquet around the thigh just above the knee, constricting the superficial long saphenous vein sufficiently to prevent the reflux of venous blood and having the patient walk vigorously or flex and extend the knee repeatedly. The interpretation of this test is as follows:

(*a*) If the varicosities in the leg collapse during muscular contraction, the deep vein is patent, permitting the blood to pass into the deep circulation through the deep communicating veins and up toward the heart. This is known as a Perthes negative and permits treatment to the varicosities.

(*b*) If the varicosities do not collapse but become more distended and the patient feels pain or severe cramps in the leg during muscular contraction, the blood cannot pass through the deep circulation and

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up to the heart because there is an occlusion or a thrombosis in the deep vein. This is known as a Perthes positive. The superficial varicosities may be compensatory dilatations. This is an absolute contraindication for injection or ligation treatment.

A Perthes positive is sufficient evidence in illustrating an occlusion in the deep veins. A Perthes negative, however, is not always a correct interpretation of complete adequacy and patency of the deep veins. This is true in segmental thrombosis. If an obstructing thrombus is present in a short segment of the deep vein in the thigh, it is possible for the blood in the deep vein to make a detour around a segmental thrombus by passing through a deep communicating vein below the thrombus into the superficial vein and back into the deep vein through a proximal communicating vein above the thrombus. Therefore, as it is demonstrated in the illustration, an obstructing occlusion may be present in the deep vein and yet the varicose superficial veins will collapse on walking with a tourniquet above the knee. The interpretation is a Perthes negative, but in reality it is erroneous.

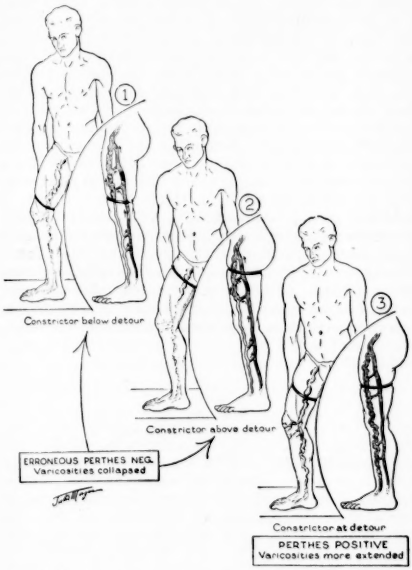
The bandage test, introduced by McCallig and Heyerdale [1] for the presence of obstruction in the deep venous circulation, is very practical and may be conclusive. However, the interpretation of the pain elicited in the test as being indicative of deep venous occlusion may be in error, since the tingling and cramps in the muscles may be caused by capillary constriction as the result of the bandage. The bandage test is based on the fact that, if an obstruction is present in the deep veins, exercise of the leg, as in walking, with compression of the superficial varicosities with a Para gum rubber bandage, will cause an increase in pain in the extremity.

The comparative tourniquet test of Mahorner and Ochsner [2] will determine the state of venous circulation in lower extremities. One must be able to interpret the relative findings of the comparative tourniquet tests and make the comparative analysis of these findings in order to establish definite conclusions.

To determine the absolute and complete patency of the deep venous circulation and rule out any existing thrombus in the deep veins, I wish to introduce a modification of the Perthes test, which is simply a repeated Perthes test at different levels. This is referred to as a multiple Perthes test. The multiple Perthes test is the only conclusive test to determine segmental occlusion, because, by placing the tourniquet at different levels, the level of the detour in the saphenous vein is constricted, and the blood is prevented from passing into the deep circulation through the communicating vein proximal to the obstruction, with the result that the varices do not collapse.

The test is simple and is carried out as follows: The tourniquet is placed first below the knee above the varicosities and the patient is instructed to walk as in the Perthes test. If the veins below the tourniquet collapse, one repeats the test by placing the tourniquet 5 inches higher. If the veins likewise collapse, one repeats the test again and again, each time placing the tourniquet at levels 5 inches higher up to the groin. The interpretation is as follows: (*a*) If the varicosities below the tourniquet collapse every time the patient walks with the tourniquet at different levels, e. g. constricting the saphenous vein at different levels, there is no segmental thrombus. (*b*) If a level is reached where the veins below the tourniquet do not collapse but become more distended, the tourniquet is constricting the level of the detour and preventing the blood from passing into the superficial vein through the communicating vein. This is evidence of an existing thrombus in the deep vein. This is demonstrated in the illustrations.

The examination of the lower extremities affected with varicose veins is not adequate if the multiple Perthes test is not performed. One must be absolutely certain that dilatations of the superficial veins are not compensatory to an obstruction in the deep veins. Failure in observing this phenomenon before instituting surgical treatment will result in undesirable and critical complications.



Multiple Perthes test for segmental occlusion of deep veins (Barone).

The cases which are suggestive of deep vein occlusion and therefore necessitate the multiple Perthes test are:

1. Cases which give a history of thrombophlebitis or phlebothrombosis.

2. Cases which give a history of leg injury, especially fracture.

3. Cases which show a suspicion of deep vein occlusion, as evidenced with pain and swelling.

4. Cases in which phlebograms show evidence of obstruction.

5. Cases in which the Perthes negative is not definite.

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1. McCallig, J. J., and Heyerdale, W. W.: A Basic Understanding of Varicose Veins, J. A. M. A. **115**: 97 (July 13) 1940.
2. Mahorner, H. R., and Ochsner, A.: A New Test for Evaluating Circulation in Venous System of Lower Extremity Affected by Varicosities, Arch. Surg. **33**: 479-492 (Sept.) 1936.

HERPES SIMPLEX ENCEPHALITIS

A Report of Two Fatal Cases

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The etiologic relationship between the virus of herpes simplex and encephalitis has for many years been a controversial subject.[1] At the time of the intense search for the causal agent of encephalitis lethargica during the worldwide epidemic of that disease, on several occasions the virus of herpes was isolated, either from the spinal fluid during life or from the brain after death. This led certain workers to believe that this virus was the cause of von Economo's disease. Others, however, were not satisfied with this theory and criticized the evidence on which it was based. In the first place the virus of herpes had been isolated from the spinal fluid of normal persons. Secondly, surprisingly few isolations of herpes were made despite the large number of cases investigated. Because of the known ubiquity of herpes simplex in man, it is likely that such isolated viruses were contaminants rather than agents possessing etiologic significance. As a result there has been a tendency among investigators to discount the validity of herpes isolations as evidence of etiologic relationship between this virus and human encephalitis of any form. However, a few publications have recently appeared which present acceptable evidence that the virus of herpes simplex is capable of producing primary encephalitis in man.[2] Since these cases are limited in number, the present report is made of results of studies on 2 additional cases of herpetic encephalitis.

CLINICAL OBSERVATIONS AND PATHOLOGY

CASE 1.—*History.*—A white man aged 26 was admitted on Feb. 7, 1944 to the Deshon General Hospital in Butler, Pa. On February 1 the patient complained of the sudden onset of persistent headache, which was shortly followed by vomiting. There is no mention of a labial herpes being observed. On February 2 he was said to be somewhat irrational and to have a fever. On admission the patient was completely disoriented, but aside from mild dehydration the physical examination was noncontributory. The temperature was 101.8 F., the pulse rate 68 and the respiratory rate 20. Laboratory studies showed red blood cells 4,120,000, white blood cells 12,400, urine normal and the Kahn reaction negative. Spinal fluid examination revealed 700 white blood cells per cubic centimeter, of which 97 per cent were lymphocytes, and a total protein content of 92.6 mg. per hundred cubic centimeters. On February 9 the patient appeared drowsy and had a stiff neck. The Kernig test was positive. The abdominal reflexes were absent and all deep reflexes suppressed. Spinal fluid withdrawn on that day contained 1,040 white blood cells per cubic centimeter, of which 97 per cent were lymphocytes, as well as many red blood cells. The total protein was 105.5 mg. per hundred cubic centimeters. The patient subsequently became comatose and on February 11 it was noted that spasticity of the right leg and flaccid paralysis of the right arm had developed. The right pupil was dilated. Death occurred on February 11, four days after admission and ten days after the onset of the disease. Autopsy was performed two and one-half hours later.

Autopsy.[3]—Aside from a slight mottling of the lungs as evidence of irregular congestion, pathologic changes were restricted to the brain.

On removal of the calvarium, the leptomeninges presented a slightly reddish tint suggesting a diffuse hemorrhage, but there was no evidence of meningitis. The brain itself was stated to be "very soft and almost mushy" despite the short interval between death and autopsy. There was a well demarcated area of hemorrhage 2.5 cm. in diameter on the middle inferior margin of the right occipital lobe. No other gross lesions were recognized. Microscopic examination [4] showed the leptomeninges packed with inflammatory cells, predominantly lymphocytes and histiocytes. This was most evident over the cortical areas but extended to the medulla oblongata, where it was more or less restricted to the areas around blood vessels. In the pons and medulla there were scattered perivascular cuffs composed of lymphocytes in both the gray and the white matter; a few nodules composed of mononuclear cells were also found surrounding destroyed ganglion cells. Sections of cortex from the right parieto-occipital region revealed a severe malacia. In the deeper layers the large majority of the ganglion cells had disappeared, with only a few ghost cells visible. As a result the cortical architecture was practically obliterated, leaving a "vast pool" of gitter cells, the majority of which appeared spherical, with vacuolated cytoplasm and with the nucleus displaced peripherally (signet ring type).

In the transition zone between the cortex and the subcortical white matter a number of cells identified as astrocytes contained rounded acidophilic intranuclear inclusion bodies associated with margination of the nuclear chromatin. These inclusions were similar to those described in experimental herpetic infections. It is noteworthy that they were not found in sections stained with hematoxylin and eosin. However, they were readily demonstrated by the phloxine-methylene blue stain used at the Army Institute of Pathology.

CASE 2.—*History.*—A white man aged 28 was admitted on July 5, 1944 to the 156th Station Hospital in Brisbane, Australia, with a history of headache, fever, chills, nausea and vomiting of three to four days' duration. He was somewhat confused. Physical examination revealed a mildly injected pharynx. No mention is made of herpes labialis being present. Aside from the fact that the right pupil was sluggish in its reaction to light, the only neurologic abnormality was the incapacity to distinguish between different odors. The temperature was 100.2 F., the pulse rate was 86 and the respiratory rate 30. Laboratory studies showed a count of 4,500,000 red blood cells and 18,300 white blood cells, with 81 per cent polymorphonuclears, 16 per cent lymphocytes and 3 per cent monocytes. Urinalysis was negative and the Kahn test was negative. On July 6 a lumbar puncture was performed. The spinal fluid was under increased pressure and contained 460 white blood cells per cubic centimeter, all mononuclear. The serum globulin was increased; the total protein measured 46 mg. per hundred cubic centimeters, and the sugar 77 mg. per hundred cubic centimeters.

On the night of admission (July 5) the patient had clonic convulsions of the entire body beginning in the face. On the following day his right abdominal and right cremasteric reflexes were absent. Though conscious, he was confused and complained of peculiar tastes and odors. During the next few days his rectal temperature varied from 99 to 103.6 F. Cerebrospinal fluid taken on July 9 contained 846 white blood cells per cubic centimeter, all mononuclear, and a total protein of 126 mg., a sugar content of 98 mg. and chlorides measuring 586 mg. per hundred cubic centimeters. Smear and culture of the cerebrospinal fluid were negative for bacteria. At this time all superficial reflexes were absent. On July 11 the rectal

From the Division of Virus and Rickettsial Diseases, Army Medical School, Army Medical Center.

1. Epidemic Encephalitis: Etiology, Epidemiology, Treatment, Third Report by the Matheson Commission, New York, Columbia University Press, 1939, pp. 11-16. Van Rooyen and Rhodes.[6]

2. Armstrong, C.: Herpes Simplex Virus Recovered from the Spinal Fluid of a Suspected Case of Lymphocytic Choriomeningitis, Pub. Health Rep. **58**: 16 (Jan. 1) 1943. Smith, Lennette and Reames.[7] Zarafonetis, Smadel, Adams and Haymaker.[8]

3. First Lieut. David H. Hollander, M. C., pathologist, and Capt. Joseph A. Walkowski, Sanitary Corps, A. U. S., chief of laboratory service, made the report of the autopsy and preliminary microscopic findings.

4. The Army Institute of Pathology, Washington, D. C., and particularly Major Webb Haymaker, furnished a report on the microscopic examination of brain material from the 2 cases presented in this paper. Our description is largely based on it.

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temperature rose to 104.4 F. and a few petechiae were observed on both lower extremities. By July 12 the patient was stuporous and could be aroused only with difficulty. He was coughing, with mucus in his throat. The pupils were unequal, the right dilated and the left constricted. Although the superficial reflexes were absent, the deep reflexes were present and equal. The petechiae seen on the previous day had begun to fade. On July 13 the patient died, eight days after admission and eleven to twelve days after the onset of his illness. Autopsy was performed one and one-half hours later.

Autopsy.[5]—The organs were grossly normal with the exception of the lungs and brain. The former showed evidence of a patchy pneumonia. When the calvarium was opened it was observed that the convolutions of the brain were somewhat flattened. A small amount of subarachnoid hemorrhage was present around the peduncles and extending outward to the under surface of the right temporal lobe, which was very soft. There was also an area of softening in the right occipital lobe, measuring about 1 cm. in diameter, but in neither of these areas was there evidence of suppuration. A few petechial hemorrhages were found in both the right and the left temporal lobes near the hippocampus.

Microscopic examination of the lungs indicated that aside from congestion there was an abundant inflammatory exudate, particularly in the bronchi, bronchioles and peribronchial areas.

Examination of sections from the brain disclosed that the leptomeninges contained many histiocytes and lymphocytes, which were most noticeable in the cerebral sections but were present to a progressively lesser extent over the pons and spinal cord. Perivascular cuffs of mononuclear cells were found in the cerebrum, pons and medulla but not in the spinal cord. The chief lesions were noted bilaterally in the temporal and occipital lobes. The architecture of the upper layers of the cortex was obscured in places by the great accumulation of mononuclear cells, many of which had large cytoplasmic vacuoles which crowded the nucleus to one side, giving the cells a signet ring appearance; these cells had all the features of gitter cells. In the involved areas the ganglion cells of the cortex were in a state of degeneration. A generalized proliferation of the astrocytes and oligodendrocytes of moderate degree was noted.

As in the preceding case inclusion bodies were not found in the original examination of sections stained with hematoxylin and eosin. However, with the use of the phloxine-methylene blue stain acidophilic intranuclear inclusions were easily found in the astrocytes of the cerebral cortex and occasionally in the oligodendrocytes. These inclusions consisted of irregular pink masses in the center of the nucleus associated with margination of nuclear chromatin.

ISOLATION OF VIRUS

CASE 1.—Four bottles containing pieces of brain and spinal cord in glycerin were received. Small pieces from each bottle were removed, rinsed with sterile isotonic solution of sodium chloride, pooled and ground in a mortar. Sufficient diluent was added to make a 10 per cent suspension, which was then lightly centrifuged and the supernatant fluid was inoculated into 6 mice and 2 guinea pigs. Each mouse received 0.03 cc. intracerebrally and 0.4 cc. intraperitoneally, while the guinea pigs were inoculated with 0.1 cc. intracerebrally, 2.5 cc. intraperitoneally and 0.5 cc. subcutaneously. Cultures of the inoculum on blood agar plates showed no bacterial growth. Four of the 6 mice became sick on the fourth day, with ruffled fur and hyperactivity. From 3 of them a virus was established in mice by the intracerebral passage of infected brain material. Of the remaining 3 mice, 1 died on the twelfth day, and the other 2 were subsequently shown to be immune to an intracerebral challenge of two hundred minimal lethal doses of known herpes virus. In both guinea pigs fever developed on the fifth day. One rapidly lost weight, had tremors and became prostrate, while the other subsequently recovered. From the brain of the first pig a virus was established in mice and guinea pigs which was similar to that recovered from the original mice.

As samples of cortex, pons and medulla, cerebellum and cervical cord had been sent in separate bottles, it was decided to test these tissues separately for the presence of virus. Accordingly a suspension of each was prepared as before and inoculated into 8 mice. Only the cortex (frontal lobe) had sufficient virus to kill or immunize the animals. Four of these mice died and 4 survived. Of the 4 survivors 3 were immune to a challenge dose of herpes virus. The groups of mice which received a suspension of tissue from pons and medulla, cerebellum or cervical cord remained well, and all succumbed when inoculated with known herpes virus. The agent recovered from the tissues in case 1 will be referred to as strain 1.

CASE 2.—Brain material was received in glycerin twenty-three days after death. Pieces of cortex and cerebellum were pooled, treated as in case 1 and inoculated into 8 mice and 4 hamsters. On the sixth day one of the hamsters was prostrate with tremors. It was killed and a virus established by the passage of its brain. None of the mice or the remaining hamsters became sick. However, on subsequent inoculation with the homologous virus, all the hamsters and 2 of the mice were found to be immune. A second isolation of virus was made in order to show that the agent was not acquired from the animals. On this occasion pieces of cortex, medulla and pons were pooled and inoculated into 6 mice and 6 hamsters. All 6 mice and 4 of the hamsters became infected and died or were killed, and strains of virus were established from each species. The agent recovered from the tissues in case 2 will be referred to as strain 2.

IDENTIFICATION OF THE VIRUSES

Behavior in Experimental Animals.—The two viruses were transferred serially in mice by the intracerebral route. The disease produced in these animals was typical of herpes simplex infection in its incubation period and its signs of infection.[6] In addition, the infection produced by both agents in guinea pigs, rabbits, hamsters and chorioallantoic membranes of chick embryos was consistent with that of herpes. Furthermore, microscopic examination revealed the presence of herpetic intranuclear inclusion bodies in the brains of these animals, the cornea of rabbits and the chorioallantois of chick embryos. While these observations indicated that the agents were related to herpes, final proof of their identity was based on the results of the following immunologic experiments.

Immunologic Relationship Between the Two Agents and the Virus of Herpes Simplex.—As pointed out in the section on the isolation of strain 1, mice which survived inoculation of human material were immune when challenged with the R. T. strain [7] of herpes virus. This indicated that strain 1 was immunologically related to herpes virus. Further evidence was obtained by cross immunity studies. One group of mice was immunized by several intraperitoneal inoculations of virus 1 and another group by similar inoculations of the R. T. strain of herpes. Ten days after the last immunizing dose the two groups of mice were tested for immunity by the intracerebral injection of the same virus used for immunization. The survivors were thus shown to be solidly immune to the homologous agent. They were then tested for their immunity to the heterologous agent by the intracerebral inoculation of 0.03 cc. amounts of varying dilutions of virus. Table 1 gives the results of this test, which show that there was complete cross immunity between the two viruses.

5. Capt. Fred Dick Jr., chief of laboratory service, furnished the report of the autopsy and preliminary microscopic findings.

6. Van Rooyen, C. E., and Rhodes, A. J.: Virus Diseases of Man, London, Oxford University Press, 1940, chapters 14 and 60.

7. Smith, Margaret G.; Lennette, E. H., and Reames, H. R.: Isolation of the Virus of Herpes Simplex and the Demonstration of Intranuclear Inclusions in a Case of Acute Encephalitis, Am. J. Path. **17**: 55 (Jan.) 1941.

As a further check on identification, two experiments were performed to determine whether antibodies produced by strain 1 and known herpes virus would cross neutralize each agent. In the first experiment a pool of herpes immune guinea pig serum was used which had been stored at — 20 C. since its preparation for the identification in this laboratory of a previous case of herpes encephalitis.[8] This antiserum was tested for its capacity to neutralize strain 1 and the known R. T. strain of herpes. In the second experiment 6 guinea pigs were hyperimmunized by the intraperitoneal injection of strain 2 were mixed with equal amounts of antiserums from animals immunized with the viruses of lymphocytic choriomeningitis, western equine encephalomyelitis, St. Louis encephalitis, Japanese B encephalitis, Russian spring-summer encephalitis and the previously identified strain 1 of herpes encephalitis. Normal guinea pig and rabbit serums also were included. The herpes antiserum was the only serum which neutralized the agent.

Thus the results of this experiment indicated that strains 1 and 2 were immunologically related.

TABLE 1.—*Cross Immunity Tests in Mice with Strains of Herpes*

Strain of Virus Used to Immunize Mice	Dilutions of Challenge Virus: Strain 1 10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	R. T. Strain 10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}
Strain 1	....	....	....	....	....	....	0/10	0/10	0/10	0/10	0/8	....
R. T.	0/10*	0/10	0/10	0/10	....	....	....	....	....	....	....	....
Controls	4/4	5/5	3/3	0/6	1/6	....	6/6	6/6	6/6	1/6	1/6	0/6

* Numerator represents number of mice dying. Denominator represents number of mice inoculated.

TABLE 2.—*Cross Neutralization Tests in Mice with Strains of Herpes*

Test	Guinea Pig Serum	Final Dilutions of Virus: Strain 1 10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	R. T. Strain 10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}
1	Normal	4/4*	5/5	3/5	2/5	0/5	...	4/4	5/5	5/5	5/5	3/5	1/4
	Anti-herpes (R. T. + M. B.)	5/5	0/5	0/5	0/5	0/5	...	5/5	1/5	0/5	1/5	0/5	0/5
2	Normal	4/5	4/6	2/6	0/6	0/6	...	6/6	5/6	3/6	2/6	0/6	1/6
	1	2/6	2/6	0/6	...	...	...	0/6	0/6	0/6	0/6	...	...
	2	1/6	2/6	0/6	...	...	...	0/5	1/6	0/6	0/6	...	...
	3	3/6	1/6	0/6	...	...	...	1/6	2/6	0/6	0/6	...	...
	Anti-strain 1												
	4	4/6	3/6	0/6	...	...	...	1/5	0/6	0/6	0/6	...	...
	5	1/6	0/6	0/6	...	...	...	4/6	0/6	0/6	0/6	...	...
	6	1/6	2/6	1/6	...	...	...	5/6	0/6	0/6	0/6	...	...

Virus dilutions 1:5, 1:50, 1:500 and so on were prepared. Final dilutions of the virus were 1:10, 1:100 and so on since equal quantities of undiluted test serum were mixed with each virus dilution. Serum-virus mixtures were incubated for one hour at 37 C., and 0.03 cc. was inoculated intracerebrally into mice.

* Numerator represents number of mice dying. Denominator represents number of mice inoculated.

TABLE 3.—*Cross Neutralization Tests in Mice with Strains of Herpes*

Guinea Pig Serum	Dilutions of Virus: Strain 1 10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}	10^{-6}	Strain 2 10^{-1}	10^{-2}	10^{-3}	10^{-4}	10^{-5}
Normal	...	...	5/5*	5/5	2/5	0/5	...	5/5	5/5	2/5	0/5
Anti-strain 1	5/5	2/5	2/5	0/5	...	...	4/5	0/5	1/5	0/5	...
Anti-strain 2	5/5	4/5	0/5	0/5	...	...	3/5	1/5	0/5	0/5	...

* Numerator represents number of mice dying. Denominator represents number of mice inoculated.

tion of suspensions of mouse brains infected with strain 1, followed by an intracerebral challenge dose of the same material. Specimens of serum from these animals were then tested for neutralizing antibodies against the strain 1 and R. T. viruses. Data obtained in these two experiments are given in table 2 and show that there was definite cross neutralization between our strain 1 and the R. T. strain of herpes.

Immunologic identity of strain 2 was determined in two neutralization experiments. In the first, dilutions

A second experiment was performed in which agents 1 and 2 were directly compared in cross neutralization tests. Four guinea pigs were immunized with strain 2 by repeated intraperitoneal inoculations of suspensions of infected mouse brains. Their postinoculation serums were pooled and represented strain 2 immune guinea pig serum. For strain 1 immune guinea pig serum use was made of serum 3 listed in table 2. These two serums were then tested against both strains of virus. Table 3 summarizes the results. It is obvious that there was no significant difference between the two serums in their capacity to neutralize both strains of virus. There was complete cross immunity.

8. Zarafonetis, C. J. D.; Smadel, J. E.; Adams, J. W., and Haymaker, W.: Fatal Herpes Simplex Encephalitis in Man, Am. J. Path. **20:** 429 (May) 1944.

COMMENT

A few points of interest should be noted in these cases. In the first place, areas of softening in the brain were present even though autopsy was performed a few hours after death. In case 1 the whole brain was described as "very soft and almost mushy," while in case 2 there was the note that "the right temporal lobe is very soft. . . . There is also an area of softening in the right occipital lobe measuring about 1 cm. in diameter." In this connection, in their report of a similar case of herpes encephalitis Zarafonetis and his associates [8] state that "along the inferior margin of the left temporal lobe was an area of softening about 4 cm. in diameter." These areas of softening are associated with the loss of ganglion cells, which are replaced by gitter cells. The loss of normal architecture coupled with the presence of intranuclear inclusion bodies are characteristic features of the few cases of herpes encephalitis so far reported.

Acidophilic intranuclear inclusion bodies have been found in our 2 cases and those reported by Smith and her co-workers [7] and Zarafonetis and his associates.[8] However, it is noted that in our cases these inclusions were not seen in routinely prepared pathologic sections and were demonstrated only when special stains and technics were used. It is suggested therefore that in all cases of fatal encephalitis in which a decided loss of cortical structure is associated with malacia, attempts should be made to determine whether or not these inclusions are present.

Original material from each of the 2 cases yielded virus on inoculation into mice and into either guinea pigs or hamsters. An early indication of the identity of these agents was obtained when pocks were produced on the chorioallantoic membrane of chick embryos by the inoculation of infected mouse brain material. It may be mentioned that none of the epidemic neurotropic viruses are characterized by such pock formation. Studies were completed which demonstrated the classic histopathologic lesion in experimentally infected tissue, as well as the immunologic identity of the agents.

CONCLUSIONS

The virus of herpes simplex has been isolated from glycerolated brain material from 2 cases of fatal encephalitis. The clinical features in both cases were characterized by disorientation and drowsiness, with the late appearance of minimal reflex changes. Despite the paucity of physical signs, the brains at autopsy had areas of softness, and microscopic section revealed unusually severe malacia with loss of cortical architecture. Intranuclear acidophilic inclusion bodies were demonstrable in both cases with the use of a phloxine-methylene blue stain but were not observed with routine stains and technics.

First to Apply the Microscope.—The first to apply the microscope to the study of disease was Athanasius Kircher (1602-1680), professor of physiology at Würzburg, who in examining the blood of plague stricken patients found "countless masses of small worms, invisible to the naked eye." It is generally agreed that what Kircher really saw were masses of red blood corpuscles, as he could not have seen plague bacilli with lenses of such low power. Yet his inference was correct, for he stated that contagious diseases were conveyed by minute living organisms. Fracastorius had advanced a similar idea but had produced no evidence to support it.—Guthrie, Douglas: A History of Medicine, Philadelphia, J. B. Lippincott Company, 1946.

Special Article

FOREWORD

Since the elimination or curbing of the great epidemic diseases of childhood, such as smallpox, diphtheria and summer complaint, no disease has created greater apprehension among people than infantile paralysis—not because of its mortality or even its incidence rate in epidemics but because it may produce such tangible and lasting crippling in the victim it does claim. This fear has led to much discussion, much publicity in the press and the advocacy of nostrums and treatments which are heralded as "cures." The burden of the care and rehabilitation of crippled children has long been the main work of medically and surgically trained specialists who derive their very name of orthopedist from the fact that they are dedicated to the straight child (orthos pais). It has accordingly seemed wise to the American Orthopaedic Association in the midst of all this clamor to set forth in a brief primer the basic knowledge and the methods of treatment which have been found generally to produce the best results in the care of poliomyelitis cases.

INFANTILE PARALYSIS, OR ACUTE POLIOMYELITIS

A Brief Primer of the Disease and Its Treatment

THE AMERICAN ORTHOPAEDIC ASSOCIATION

DEFINITION

Poliomyelitis, or infantile paralysis, is an acute generalized systemic disease caused by a virus and characterized by inflammation of various parts of the central nervous system but particularly by the damage to or destruction of the large motor cells in the spinal cord, with resultant paralysis of the voluntary muscles innervated by them.

HISTORY

Poliomyelitis is not a new disease, having been first definitely described in medical writings in 1784 by Underwood of London, though probable cases of it are found recorded in literature even back in ancient times. In 1835 John Badham reported 4 classic cases in children aged 2 years occurring in what would now be called a local summer epidemic in rural England. In 1840 Jacob Heine of Connstatt published his first monograph, giving a clear clinical description of the disease and discussion of treatment, which he followed in 1860 by a second article pointing out its "spinal" character. The essential lesions of the central nervous system were gradually explored in the period between 1863 and 1888 by von Reinecker and von Recklinghausen and others and finally by Rissler in 1888, who described the changes in acute cases.

In this country the first epidemic was noted in Louisiana by George Colmer in 1841. The foundation of our knowledge of the epidemiology of poliomyelitis was laid by Medin in 1890, and thus the disease is sometimes known in Europe as Heine-Medin's disease. Animal experimentation began to be fruitful in 1909, when monkeys were successfully inoculated by Landsteiner and Popper, Flexner and Lewis and others, who thus demonstrated that the disease was caused by a filtrable virus.

Much careful and difficult investigation, clinical, epidemiologic and experimental, has been carried on in

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the thirty-seven years since the discovery of the virus character of poliomyelitis, and progress has been steady. Valuable information has been accumulated but as yet certain essential knowledge has not been won as to its transmission, its mode of invasion of the central nervous system, the tissue reactions of the host and the development of an active or passive immunity. These are the real goals which science strives to reach, for far more important than the necessary and appealing rehabilitation of the paralytic are the elimination of the infection or the positive protection of the child from the disease in the first place.

EPIDEMIOLOGY

Infantile paralysis is worldwide in distribution but is more prevalent in temperate climates. It is a disease of summer and autumn, though occasional cases may occur during any month of the year. The number of cases in a given region follows an irregular curve from year to year, reaching epidemic proportions at intervals. The disease, therefore, occurs in sporadic, endemic and epidemic forms.

It is a disease of childhood, although it may occur at any age from infancy through maturity. In children the incidence is somewhat higher in boys than in girls, though in adults there is no such sex variation. Race and color are not significant. About 60 per cent of the patients are under 10 years of age, while over 80 per cent are under 15.

While some epidemics have occurred in large metropolitan areas, when the total cases for the whole country are reviewed it can be seen that it is primarily a rural disease. This rural distribution plus the seasonal character point to a gastrointestinal portal or insect vector or both as the likely mode of transmission. Earlier suspicion of the upper respiratory route suggested by finding virus in nasal washings of patients and by monkey inoculation has been shifted by the work of Paul, Trask and Sabin to the alimentary tract, for they found virus in quantity in stools, sewage and trapped flies in epidemic areas. Healthy carriers of the virus with heavy infestation of stools are a well known feature and, as there are also a large number of abortive or unrecognized nonparalytic cases associated with actual paralytic cases in an epidemic, the virus must have a very much wider spread dissemination than realized from the recognized cases alone.

There are certainly great natural variations in the virulence of the virus from year to year, and there are undoubtedly variations in the susceptibility of the individual host also. This is recognizable in the case of pregnancy, as the incidence is far higher proportionately in pregnant than in nonpregnant women of the same age. Tonsillectomy also seems definitely to predispose to infection, and in such cases the bulbar type of the disease predominates with a very high mortality rate. Excessive exertion or fatigue appears to be a possible precipitating factor.

The incubation period varies from seven to twenty-one days, with seven to fourteen usually. It has been recently demonstrated, however, in 1 patient with known time of exposure that the virus appeared in the stool six days after contact, yet the patient did not develop the disease clinically until the twenty-fifth day. Second attacks are very, very rare but have been reported and can be induced in monkeys, showing that immunity from previous attack is not absolute.

However suggestive these findings are, there is as yet no absolute proof of an intermediate host or animal pool, no known insect vector, no definite portal of entry or recognizable initial lesion nor, in fact, any typical lesion outside the central nervous system nor any essential precipitating or sensitizing factor.

The direction of preventive measures in an epidemic area is naturally under the local public health authorities. However, well children are warned against crowded places generally, especially indoors, swimming pools, travel, streams and water subject to pollution, overexertion and tonsillectomies. Paralytic patients should be hospitalized if possible, at least screened, and bedding and excreta sterilized.

General sanitation of the community should be carefully checked, especially sewage disposal and the milk and water supply. Anti-insect measures are impracticable in rural areas, where most cases originate, but much can be done to protect food supplies in stores and homes from contamination. However, the healthy carrier and unrecognized nonparalytic patient make all reasonable preventive measures imperfect, and to rally public morale it should be remembered that while the mortality rate per hundred cases is high the morbidity rate per hundred thousand of population is always low. Most families and their children escape unscathed.

PATHOLOGY

To treat a disease properly it is essential to know the location and character of the tissue lesions it produces. The pathologists have well established that the essential lesions of poliomyelitis are all in the central nervous system even though the muscle weakness of the extremities is the obvious change noted by the patient. The virus has been recovered at one time or another from most of the tissues of the body, but no striking or permanent lesions seem to result from this systemic invasion.

The invasion of the central nervous system occurs as a relatively late manifestation and is now believed to occur by extension along neuronal pathways rather than by vascular, lymphatic or other humoral methods. Certainly the work of Fairbrother and Hurst and more recent experiments of Howe and Bodian indicate that the virus is almost entirely neurotropic, infecting the neurons and not the neuroglia, and traveling from one part of the nervous system to another by passage along the axis cylinders. Sabin showed that in the primary bulbar type of the disease there were extensive neuronal lesions in the medulla with diminishing manifestations as one descended in the spinal cord. The exact reverse of this holds true in the spinal type of the disease. He feels that in the primary bulbar type the virus invades along the fifth, seventh, ninth and tenth cranial nerves from the upper alimentary tract, while in the primary spinal type the invasion may well be along the visceral afferent fibers from the intestine by way of the posterior root ganglions. All recent evidence points away from invasion through the nasal mucosa and the olfactory nerve, as was once considered likely.

The virus, while it is generally neurotropic, has a very special affinity for the large motor cells of the anterior horn of the spinal cord. The destruction, partial or complete, which takes place in these cells represents the basic underlying pathologic process for this disease and was accurately described by Rissler in 1888 as a process of chromatolysis, lysis, coagulative necrosis and neuronophagia. This has been again more lately stressed by Sabin and Ward, who describe four stages: (1) chromatolysis and acidophilic intranuclear inclusions, (2) acidophylic necrosis, (3) invasion by

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polymorphonuclear leukocytes and (4) complete neuronophagia.

Sabin feels that up to and including stage 3 the process is reversible and the neuron may recover, as the damage is still partial, and that only at stage 4 is the destruction complete and therefore irreversible and no recovery possible. This is the pathologic basis for the extensive clinical recoveries from early paralysis so commonly seen.

The damage to or destruction of the anterior horn cells of the cord and motor nuclei of the brain stem give rise to temporary or permanent paralysis of the skeletal muscles by depriving them of their innervation. The muscles lose tone, become flaccid and undergo the secondary degenerative changes common to any denervation. Return to normal in the muscles occurs only if and when the motor neurons recover and reestablish innervation.

Infrequently when the attack of the virus is on the brain stem and it extends upward, lesions of the cerebrum are produced extensively and a spastic type of paralysis may result from destruction of the upper motor neurons. There is also a diffuse encephalitic type of lesion found in occasional cases in poliomyelitis epidemics.

There is coincidental inflammation of the posterior root ganglions and other nerve elements and meningeal irritation with cellular and chemical changes in the spinal fluid, but such lesions are transitory and seem to have no permanent after-effects.

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SYMPTOMATOLOGY AND COURSE

The onset of infantile paralysis is very similar to that of many acute illnesses with fever, malaise, gastrointestinal symptoms often associated with headache and occasionally nasopharyngeal irritation. Of gastrointestinal symptoms vomiting is the most common, although diarrhea may occur.

In about 30 per cent of the cases a Bactrian and biphasic type of acute illness is recognized in which there are two distinct febrile episodes. In the first the patient has what appears to be an inconsequential illness which is nonspecific in type, associated with a variable amount of fever, usually not very high and lasting twenty-four to thirty-six hours. Following this the patient has a normal temperature for from one to eight days, on the average two to three days, and feels well or relatively well, only to develop a more severe type of acute illness which is associated with evidence of involvement of the central nervous system.

However, the second febrile phase is more often the only one that is present or at least recognized. For practical purposes it may be considered that the two phases of the acute illness are continuous in this type of onset, with the intervening afebrile period omitted. When the second phase is reached the disease should be recognized clinically. The symptoms are those of a general illness, previously mentioned, to which are added symptoms indicating a pathologic process in the central nervous system. Headache may be very severe in adults, although this is not so likely in children. Muscle soreness appears in various areas but usually first in the neck and back, where a feeling of stiffness may be described. Muscle spasm can be elicited particularly in the neck and back and hamstring muscles. Straight leg-raising becomes very limited, as does forward flexion of the neck and back. On the second or third day of the febrile illness the clinical signs referable to the central nervous system increase. Sensitivity and spasm are likely to be present in muscles other than those attached to the back. Irritability and apprehensiveness are common but, on the other hand, if the process is accompanied by a large encephalitic component, drowsiness even approaching stupor may be present. It is not unusual to have a patient who seems very drowsy who, when aroused, becomes alert and apprehensive.

Paralysis is likely to occur on the second to the fourth day. The paralysis appears first as a weakness of particular muscles, which increases in degree and distribution with varying rapidity. It ordinarily reaches its maximum extent within forty-eight to seventy-two hours after it appears, although certain patients have continued fever and progressive paralysis for several days, even to fatal termination. The picture is one of weakness of flaccid type, together with irritability of the muscles which is elicited by stretching but may sometimes be observed with the patient at rest. The positions adopted by the parts are those occasioned by the spasm and weakness. Once the fever has returned to normal for twenty-four hours it is unusual for further paralysis to occur. Ordinarily the temperature is normal within four to seven days after the onset of the main febrile episode.

The patient does not like to be disturbed and is apprehensive of being handled. The spasm and sensitivity vary greatly in extent. The posterior neck, the erector spinae muscles and the hamstrings are almost universally involved to a considerable degree. The muscles of respiration may be in spasm, and it is not unusual to observe the respiratory exchange occurring with the thorax in a relative, inspiratory position. The paralysis is most variable both in degree and in distribution. In a considerable percentage of mild cases none can be recognized clinically, whereas practically all the skeletal muscles can be affected in severe cases. The paralysis is likely to be scattered in distribution, although it tends to be regional. The individual muscles are affected in varying extent, from weakness which can barely be detected to complete paralysis without palpable contraction.

Reflexes are diminished in the involved areas, although in the period of invasion there may be a transient hyperflexia.

In very rare instances in which encephalitic involvement predominates spastic paralysis may occur. The presence of sensitivity and spasm in conjunction with paralysis must be differentiated from spastic paralysis of the upper motor neuron type.

Death, if it does occur, is usually due to respiratory involvement, which may be of two general types: bulbar, in which the medullary centers are affected, and spinal respiratory, in which the muscles of respiration themselves are affected by paralysis. It is quite important to differentiate between the two groups of respiratory involvement. The bulbar type is characterized by irregular respirations, difficulty in swallowing and changes in the voice. In the spinal type the muscles of respiration are affected so that the motions carrying out the respiratory mechanism are obviously weak or paralyzed, the accessory muscles of respiration are used and dilatation of the alae nasi occurs, the breathing is regular but the respiratory exchange is obviously inadequate, leading to cyanosis and anoxia. Cardiac failure may occur in the bulbar type, particularly when overactivity of a delirious patient is allowed to occur.

Significant changes in peripheral sensation are unusual, although occasionally hypesthesia and even

anesthesia may be found. Loss of control of the bladder with retention may be present for a few days at the onset, but full recovery of this function occurs rapidly.

It is well to emphasize that the clinical picture of the acute stage is most variable and that occasionally and particularly in infants and in sporadic cases paralysis may be the first and only symptom that is recognized.

Following the subsidence of the fever and the regression of the virus activity in the nervous system, the disease enters the recovery stage. The recovery stage can be divided clinically into two periods:

First the subacute state, when all danger of further paralysis is over but during which the effects of the general inflammatory reaction in the nervous system are still manifest, as shown by nervousness, irritability, tenderness, hyperesthesia, stiffness and spasm in addition to the essential muscle weakness or paralysis. This stage may last from a few days to as long as two months, with gradual fading out of the nonmotor by-products.

The second or convalescent stage, which is reached when purely motor weakness is all that remains. The length of the convalescent stage is still more uncertain and variable. The older estimate of three to five years during which improvement of motor function could be anticipated with the recovery of damaged but not destroyed motor nerve cells has been greatly reduced. Recent observations indicate that the convalescent stage lies somewhere between nine and eighteen months at most, and the residual stage begins for those in whom paralysis has persisted beyond eighteen months. Even the residual stage is not without hope, however, as it is at this time that reconstructive surgery can accomplish much for the patient. All during the recovery period spontaneous return of power is to be expected, and proper measures to facilitate the natural recovery are of great importance and value.

An extreme variability between individual cases, even in the same epidemic, is a feature of the onset, symptoms, severity, course and after-effects of this disease.

DIFFERENTIAL DIAGNOSIS

Acute poliomyelitis is easy of early clinical detection during the full-blown epidemics and can often be diagnosed in the preparalytic stage and in abortive forms at such times. It is only when definite paralysis has occurred, however, that early epidemic or occasional cases can be diagnosed. Diagnosis in doubtful cases can be checked by lumbar puncture showing a slight increase of pressure, and a clear fluid with moderately increased cell count of mononuclear character.

History of injury is sometimes misleading, but no other acute infectious process really gives one the picture of such a flaccid type of weakness. The meningitides, coccic and tuberculous, transverse myelitis, encephalitis, hysteria, the pseudoparalysis of congenital syphilis and even subacute osteomyelitis must be excluded in each case depending on the age, history, accompanying sensory changes and hyperesthesia.

The best early clinical sign of an impending poliomyelitis in an ailing child in late summer or early autumn is inability to bend the neck far forward. If this symptom is absent, no danger to the child is imminent in the next twenty-four hours.

In the residual stage one has less difficulty in diagnosis if a reliable history is available, as other illnesses combining flaccid weakness without sensory loss are rare and have a very different background.

THE PROGNOSIS IN POLIOMYELITIS

Prognosis as to Life.—The mortality rate has varied greatly in different epidemics and in different localities. In New York City and State in 1916 it was 25.2 per cent. In Sydney, Australia, in 1937 it was less than 1 per cent. In Manitoba in 1941 the death rate was but 1.8 per cent. The average mortality in recent epidemics in this country has been 7 to 8 per cent. In general the death rate in recent years has been lower than in earlier epidemics. This is probably due to a more general recognition and recording of the abortive cases of paralysis. It should be recognized also that the toxicity of the virus may vary in different epidemics and in different localities, for the mortality is higher in widespread epidemics such as in 1916. Death occurs from respiratory failure or from a pneumonia which may arise not only during the acute phase of the disease but even many weeks later. The highest mortality, recorded as 42 to 80 per cent, occurs in cases of the bulbar type of paralysis. The prognosis is worse in adolescents and in adults than in children under 10 years of age.

Prognosis as to Recovery from Paralysis.—The possibility of the recovery of any paralyzed muscle is absolutely dependent on the condition of the motor cells which innervate the muscle. Cells which have been destroyed by the virus of this disease can never be reproduced. Cells which have been damaged but not destroyed may recover their physiologic function. If all the neurons which innervate a particular muscle have been destroyed, that muscle will be completely and permanently paralyzed. If some of the cells have been killed and some survive there will be a partial recovery of the power of the muscle, the degree, naturally, being dependent on the relative number of the motor cells which recover. If all the cells remain vital after the destructive phase of the disease has run its course, there is the possibility of a return of normal power in the muscle.

Spontaneous improvement in the overall picture begins in most cases within a few days and in practically all cases within a few weeks.

The prognosis is worse in severe attacks of paralysis and in those involving all muscles below a certain level, although there are many exceptions to this general rule. A slow progress of paralysis with exacerbations and involvement of new muscles over a period of days and excessive and long persisting tenderness are unfavorable factors in the prognosis.

Patients with the bulbar type either die or recover without paralysis of the peripheral muscles.

At the beginning of the stage of convalescence or recovery from poliomyelitis the physician cannot know the pathologic conditions present in the motor centers in the spinal cord and can have no reasonable opinion as to the ultimate prognosis. But such an opinion can be given at the end of three months and at times even before that.

Muscles that show early and rapidly developing return of strength will probably make a full recovery. Those which have but moderate or little strength at the end of this period will probably never make complete recovery. Muscles which are completely paralyzed at the end of three months will probably always remain so. In other words, at the end of three months the spinal motor cells have or have not recovered their physiologic activity and no further change in them

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may be expected. This does not mean that muscle fibers to which active motor innervation has been restored may not continue to grow in strength for an indefinite time. To this end treatment during the long convalescent period is definitely directed.

The prognosis, therefore, while primarily dependent on the irreversible or reversible damage to the neurons may be modified and made less favorable by the absence of proper treatment during the period of recovery. The factors which favorably or unfavorably influence the recovery of the muscles will be discussed under the subject of treatment.

The percentage of recovery depends on the factors that have been enumerated and varies with the nature of the epidemic. Many statistics are available from many parts of the world since the time of Wickman, 1911, to the present day. A survey of these leads to the following observations:

1. The abortive, or nonparalytic, type constitutes at least 20 per cent of the total cases reported. This percentage has been much higher in instances in which more careful diagnostic search has been made for these cases. As paralysis has never been present, they should be excluded from statistics of complete or partial recovery from definite paralysis.

2. Spontaneous complete recovery from paralysis has occurred in from 35 to 60 per cent. Many statistics do not enumerate the number of abortive cases and must be excluded from consideration. When all cases, including the abortive cases, are considered, complete recovery has occurred in from 55 to 80 per cent.

3. About 2 per cent remain completely disabled.

4. Ten to 20 per cent require the use of braces or aid from reconstructive surgery.

5. The remainder have no significant handicap.

On the whole, the prognosis in poliomyelitis is favorable, and one may agree with one author who states that "with good care 75 to 85 per cent of the cases will show marked improvement or complete recovery."

The Prognosis of Ultimate Functional Use of an Affected Extremity.—This depends on the location and the extent of the residual paralysis and on orthopedic treatment in the final stage of paralysis. Parents often wish to know whether the child will be able to walk, have a bad limp, have a shrunken and short leg or be able to use his hands and his arms. The physician with a knowledge of the anatomy and function of muscles will be able to give a fairly accurate reply to these questions. Weakness or paralysis of some muscles produces more alteration of gait than paralysis of other muscles. Paralysis of the muscles of the hand and forearm is a more serious handicap than paralysis of the shoulder. Function of flexors of the elbow is more important than that of the extensors. Unparalyzed gluteal muscles will enable the child to walk without braces or crutches. The shortening of a lower extremity depends, with some exceptions, on the extent of the paralysis and the age at which it has occurred. The orthopedic surgeon can visualize the improvement in function which can be obtained by operative procedures.

TREATMENT IN THE ACUTE PHASE

Treatment of the acute phase of anterior poliomyelitis is primarily the responsibility of the pediatrician or family doctor. However, the orthopedic surgeon has been charged with, and should be prepared to accept the responsibility for, the preservation of function and the prevention of deformities in the spine and extremities of these patients.

Loss of function during or following an attack of acute anterior poliomyelitis may result from prolonged muscle spasm, deformity or muscle paralysis. It would seem obvious, therefore, that the best results can be obtained if the orthopedic surgeon works in close harmony with the family physician or pediatrician from the day the diagnosis of acute poliomyelitis is made.

Acute anterior poliomyelitis may be subdivided into the (1) preparalytic, (2) abortive and (3) paralytic phases.

Preparalytic.—When the diagnosis is made early after the onset of illness at a time when no paralysis has appeared or can be demonstrated, the poliomyelitis patient should be treated by bed rest with care given to position in bed, sedation and the avoidance of fatigue or of excessive handling such as might be required by transportation over long distances in order to reach a hospital.

Positioning in bed is preferably accomplished by the use of a firm mattress with boards between it and the springs. A foot board serves the dual purpose of keeping the bed clothing from pressing down against the feet and affords a smooth surface against which the feet may be braced in a position of 90 degrees dorsiflexion and neutral with respect to rotation.

If the patient is decidedly toxic and unable to retain fluids by mouth, the fluid balance of the body must be maintained by intravenous feedings. The consensus has ruled against the use of convalescent or adult serum as a specific agent. Blood plasma or whole blood, however, may be of value to restore plasma proteins or for the prompt correction of anemia should this be present.

During this stage, which may last three to five days after the onset of the disease, there may be manifestations of involvement of the sympathetic nervous system as well as of anterior horn cells. Patients with these symptoms are restless and apprehensive. Sedation by means of barbiturates and, in the rare cases in which there is an appreciable amount of pain, morphine in doses suitable to the age of the patient should be given. Heat may be soothing and, unless the patient's own temperature exceeds 101 F., moist but not wet woolen packs should be applied over the spine and to each extremity in which there is beginning weakness, muscles soreness or a change in muscle tone. These packs should not be kept on continuously but should be used for one to two hours morning and afternoon. In order to avoid as far as possible handling of the patient, these hot packs are not wrapped round but are simply laid on the involved extremity or the spine. This has been designated "prone packing."

Abortive.—The abortive case of poliomyelitis is that one in which the early symptoms of the disease are definite and may be confirmed by spinal puncture but in which paralysis is not manifested. Most of these cases are never recognized. These patients need no special care beyond continued bed rest and sedation, though they should be examined for spasm or hypertonicity of the muscles of the back. Tightness or spasm of the spinal and the hamstring muscles should be treated by application of heat, either dry or wet, once or twice each day. Later spine flexion exercises should

be instituted to relieve contracture or shortening of muscles until normal flexibility of the spine has been restored. This restoration of length of shortened or spastic muscles is essential regardless of whether or not there is demonstrable paralyis.

Paralytic.—With the onset of actual paralysis the program of bed rest, sedation and protection by bed positioning is continued. Muscle examinations should be made but should be limited to the most superficial testing in order to avoid fatigue. The foot board is now of greatest value. If correctly used it will maintain dorsiflexion of the foot and prevent shortening of the gastrocnemius or soleus muscles. Occasionally it may be advisable to use splints of wire or plaster shells to support and maintain the physiologic position of muscles which have been partially paralyzed and might be weakened still further if permitted to become stretched by malpositioning.

With the first onset of paralysis the attending physician must be constantly on the lookout for signs of bulbar involvement. The purely bulbar manifestations are less common, however, than are those in which there is mixed paralysis with both bulbar and spinal manifestations. Difficulty in swallowing may precede difficulty in breathing. Artificial respiration may have to be administered while a respirator is being located or prepared.

The use of a respirator for patients who have bulbar involvement has been urged by certain clinicians and condemned by others. Those who are most experienced in the handling of poliomyelitis patients during the early phase of paralysis know that the pure bulbar type of the disease, or the type in which the bulbar manifestations predominate and the spinal involvement is moderate or minimal, offer the best opportunity for complete recovery if life can be maintained through the acute phase of the disease. For this reason it would seem to be essential that every possible effort be made to keep such patients alive during this early paralytic phase. If a respirator is available, it should be used when respiratory distress, fatigue or cyanosis becomes evident. The patient should be taught to breathe with the respirator instead of struggling against it. If the patient has extensive evidence of bulbar involvement with difficulty in swallowing, the foot of the respirator must be elevated about 10 inches to provide postural drainage and to make aspiration of saliva and other secretions less likely. Mouth feeding is impossible and the stomach tube dangerous, so intravenous feeding is essential. Suction to clear the upper respiratory tract is important. Penicillin to prevent pulmonary complications is indicated. The nurses and the doctor must constantly reassure the patient and also the family as far as it is possible to do so with honesty. One can always be sure, if the patient survives, that there is to be some measure of improvement.

Heat is recommended for all patients during the acute phase of the disease. Both radiant heat and warm moist packs have been found of value. There is no convincing evidence of the superiority of either method over the other. Prolonged heat of any kind, however, not only brings about dilatation of the cutaneous and other peripheral capillary blood vessels but may produce passive congestion in muscles which are not being moved or exercised and thus increase rather than reduce muscle stiffness, fibrosis and shortening. Heat should be applied intermittently and for not more than one to two hours daily.

Physical therapy during the acute paralytic phase of acute anterior poliomyelitis must be carefully supervised and restricted in its application. Heat therapy should be administered under the direction of a physical therapist or nurse who has had experience and training in the correct handling of patients suffering from this disease. Passive or active movements may be used with the purpose of preventing contractures and of relaxing muscle tensions but must never be carried to the point of producing pain. Circulation within muscles may be improved by this early but very gentle passive or, when muscle power is still present, active movement.

Thus, through carefully positioning the patient in bed with the knees relaxed in a few degrees of flexion, the feet held at 90 degrees dorsiflexion, the arms abducted slightly from the sides and in slight external rotation at the shoulder and the back supported by a firm bed, and with the additional factors of heat and early movement of the extremities, most contractures and deformities can be prevented.

During the early paralytic stage it is imperative that there be adequate fluid intake and adequate fluid elimination. The care of the bowel as well as of the bladder must not be neglected. Enemas may be necessary if there is serious involvement of the abdominal muscles. The patient who is being treated by means of hot packs or any other type of heat will perspire profusely. This requires restoration of fluid and of sodium chloride and vitamin C. Children appear to need these supplements or replacements in as large amounts as do adults. Each patient should be given one 7½ grain (0.5 Gm.) capsule of sodium chloride three times daily and 100 mg. of vitamin C morning and evening each day. Because of the involvement of nerve tissues, thiamine hydrochloride three times each day, although its therapeutic value is theoretical, is recommended.

The emotional and psychologic manifestations in poliomyelitis have not been adequately studied or evaluated. If the onset of paralysis is sudden and severe, the patient may become frightened and apprehensive. This fear and nervousness is more evident in the older child or adult than in young children. These older patients are in a position to appreciate more fully the catastrophe which has befallen them and to realize more adequately the problems which a severe paralysis will create as far as life in the future is concerned. The patient must be "understood" and reassured. This does not mean that false prognoses should be given. The patients, however, must be helped to begin to face the realities of their condition. Without this psychologic adjustment all other effort to help will be wasted.

It is essential that the doctor devote adequate time to educating the family group. The mother and father and other members of the immediate family who are old enough to understand and cooperate must be made to realize that they have a most important part to play in the recovery of the patient. They should be taught to adopt an attitude of calm assurance, to avoid anything approaching hysteria, emotional outbursts or excessive parental concern.

TREATMENT IN THE RECOVERY STAGE

A. *Subacute Recovery Stage.*—As the transition of the disease from the acute paralytic stage to the early subacute recovery stage is a gradual and almost imperceptible one, evidenced chiefly at first by regression of fever and absence of new paralysis, so the therapeutic

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measures also do not abruptly change. Respirator patients have to continue with their mechanical breathing for days and weeks often before sufficient recovery of muscle control and power makes it safe to remove them from the respirators. This must be done gradually for short intervals only—a slow weaning process with concomitant building up of muscle strength within the patient. This is a dramatic example, perhaps, but illustrates the principle to be followed with their less dangerously paralyzed fellow sufferers also. Bed rest with careful positioning to afford protection and relaxation to affected parts must continue, with perhaps substitution of splints or plaster shell casts on affected limbs to afford a chance for the more rapidly increasing activity of unaffected parts.

As early as possible in this stage it is desirable to get a muscle check so that one can have a basic estimate of the extent of the disease and the degree of damage done to start with. Muscle checking is a difficult technic and when done on a weak and hypersensitive patient requires gentleness, tact, patience and a trained touch. It must be realized that such an early check is complicated by the general debility of the patient. Fear, as well as hypersensitivity, makes the cooperation of patients uncertain, so that only a rough estimate of power is obtainable. As a rule completely paralyzed muscles can be readily charted by their tonelessness, which can be appreciated even by gentle palpation, and the unaffected strong muscles can also be fairly readily identified as such by touch. The muscles with partial paralysis are more difficult to evaluate at this early stage, as the patient's condition makes handling and positioning for testing often impossible, and for real accuracy one must wait till all soreness has departed. Often the examination must be discontinued to prevent overfatigue, and only a few muscles can be tried out at any one time. A week or more may be required in a bad case before a full muscle chart can be completed.

As the anxiety and irritability of the patient subside with the regression of virus activity, the sedation can be slowly reduced. The actual pain varies greatly in cases, from complete absence of discomfort to exquisite hyperesthesia. Where pain is a feature it must be mitigated by opiates with the knowledge that it will eventually disappear completely. Heat, as used in the acute paralytic stage, is continued. Radiant heat, packs or at this stage warm tubs with the patient lifted in a sheet are helpful for prolonged or severe tenderness.

Exercise may be begun tentatively as pain subsides and increased only as tolerated readily by the patient without evidence of fatigue. Massage is not used at this stage because of sensitivity of the muscle masses, but passive movement of joints in paralyzed extremities may be started over a comfortable arc of motion. Motion begun early and gently performed can prevent stiffening of joints, and it is especially beneficial where splinting is used to insure against restrictive contracture of strong muscles opposed only by weakened or paralytic ones. Passive movement can be slowly and steadily increased just as exercise. The patient's reaction should be the guide, but it is safer to err on the conservative side and thus avoid overfatigue, pain and overstretching. We must court the recovery of the damaged nerve cell by not imposing reflex or other avoidable stimulation to it. We must recall that at this time the central nervous system as a whole is still in an inflamed and irritable state, and we must strive to spare it by disturbing the patient and his sensitive body only when necessary and for as long as readily tolerated. Protection and comfort are still our watchword at this time.

As a rule this stage lasts but a short period and soon passes over to the painless, final convalescent stage, but when it is prolonged the general irritability and fatigability of the patient prevent attempts to adjust them psychologically to their new problems. They are still too sick to be much interested, and their chief psychologic need is still reassurance and comforting, both physical and mental.

B. *Convalescent Stage.*—This is reached in a couple of days to a couple of months from the onset with the subsidence of the general inflammatory phenomena in the central nervous system and is the period when the return of muscle power is awaited. This depends on the recovery of the lesions in the motor cells of cord and brain stem nuclei which have been damaged but not killed. Just as we have no known way to arrest the attack, we have no means to hasten this nerve repair. However, much can be done to help the patient's ultimate recovery by maintaining the muscles, bones and joints in as good physiologic condition as possible. An automobile will not start with a run down battery, but it also won't run well later if allowed to deteriorate in motor and bearings while the battery is being repaired. We cannot be sure of recovering a fully recharged battery in poliomyelitis, but we can do a lot to keep the rest of the machinery in good running order. That analogy illustrates the object of our endeavors in this stage of the disease.

This is the period when physical therapy reaches its maximum usefulness, for massage and educative exercises are of the utmost importance in restoring weakened muscles to their utmost effectiveness. With neurologic recovery the muscles return to tone and power rapidly if they have a proper combination of rest, support and graduated use together with the measures of heat and massage to stimulate local circulation.

It is at this time that care in an orthopedic children's hospital is most beneficial, for by now the patient has recovered from the systemic effects of the disease in which general medical or pediatric supervision is so important and has become a purely orthopedic problem requiring the special skills and facilities obtainable in such institutions. Travel now is no added strain, so transfer from a general hospital or home to a children's hospital is no risk. Quarantine regulations do not interfere, and in severe cases the emergency is over and long range planning for convalescence is necessary in all cases of considerable paralysis. The mild case with quick recovery of good power passes out of our picture here and needs only occasional follow-up check, so we will confine our remarks to the important minority of patients who have considerable persistent paralysis at this time.

Hospitalization is also extremely valuable in the general reeducation of the patient who is taken out of the individual sickroom where fear and self pity bloom so quickly and placed in a company of his peers, all of whom are making the same struggle to recover and adjust. He is no longer a blighted invalid among a host of pitying people but soon becomes a comrade in arms in the adventure of recovery or of remaking his

life along new lines. Adults as well as children soon catch a new spirit and hope when this change is made. The doctors, nurses, physical therapists, occupational therapists and teachers all have their active part to play in this great process of psychologic readjustment and team play to give the institution its essential *esprit de corps* and healthy atmosphere of cure.

General rest becomes less important gradually, but local protection of the affected parts is still in order. Bed rest is reserved for the severely incapacitated and, as far as possible, the partially paralyzed patient is got up and about in graduated doses and with splinting and other protection to weakened parts against deformity, overfatigue and overstretching. This is modified as frequently as the recovery of muscle power warrants.

Physical therapy is also modified frequently to suit the individual need, but basic reliance is placed on heat, massage and muscle training.

There should be careful muscle checks at the start and at monthly intervals of all paralyzed or weakened muscles, both to guide treatment and to foster the patient's interest and morale.

Underwater exercise in tubs or pools is useful at this stage and serves to give the patient confidence as well as exercise. Later gait training is important. The details of all the useful variations of physical therapy are too numerous even to mention.

Occupational therapy, regular school sessions and recreational facilities can only be mentioned in brief but are most helpful adjuncts in returning even severely involved patients to a normal manner of living.

Braces are often required as temporary aids to recovering weakened muscles and, in the lower extremities, are used as substitute supports to allow earlier ambulation and to prevent deformity, while in the upper extremity arm splints and hand opponens cuffs are the oftenest used for support. The serious trunk, back and abdominal paralyses are best treated during the convalescent stage in bed recumbency, as these muscles are hard to protect when patients are up and it is important that they regain every ounce of possible power.

Not only must the weakened paralytic muscles have careful attention, but the strong and often unopposed normal muscles must be supervised to prevent contractures and distortions occasioned by their imbalanced strength. This is particularly true of the trunk muscles, and often stretching and corrections of strong groups must be a part of the physical therapy regimen.

Atrophy of paralyzed muscles is present early and, as a result of the lessened circulation so produced, there may be changes in the growth rate of bone in a paralytic extremity. This begins early and, though its progress is slow, definite note should be taken of the bone growth at the start and end of the convalescent period. This disability is not subject to treatment but should be observed and recorded during the convalescent period.

As this brief outline can only indicate but not elaborate on, the convalescent period is the one in which more can be done actively for the patient than at any other time in the disease. We have but touched on the various types and kinds of treatment required for the seriously paralyzed patient. Fortunately, the majority of patients pass through it more or less rapidly and reenter active life as normal. For those few whose damage is permanent after eighteen months there remains the residual stage.

TREATMENT DURING THE RESIDUAL STAGE OF PARALYSIS

When this final stage of paralysis has been reached, no further spontaneous improvement in muscle power can be expected. This does not deny the fact that any individual is able by specialized exercises to increase the strength of muscles for an indefinite time. The patient at this time has a definite weakness (partial paralysis) or a complete paralysis of one or more skeletal muscles. If he has had efficient treatment during the preceding stage of recovery he should have no preventable deformities. It may be stated frankly that some deformities which are due to strong muscle imbalance are inevitable and that they become more evident and more severe after the patient has become ambulatory.

The object of all treatment during this stage of infantile paralysis is to reduce as far as possible the functional handicaps which the patient possesses as the result of the paralysis.

If any partially paralyzed muscle has been increasing in strength by specialized exercises, these exercises should be continued until it is evident that the limit of power has been attained. It is futile to try to exercise muscles that are completely paralyzed or are so feeble that they have no functional value. It is futile and wasteful to continue with expensive physical therapy under these conditions. If the use of heat and massage and corrective exercise is at times indicated for some particular and definite reason, these forms of treatment can be carried out in the patient's home.

Existing deformities which interfere with the function of the extremities should be corrected by manipulative or operative procedures.

Continued attention must be given to the prevention of deformities during the ambulatory stage. This may require the use of braces and appliances, which may also serve the additional purpose of enabling the patient to walk when otherwise he would be unable to do so and of preventing overwork and overtire of weak muscles.

The largest and the most fruitful field of treatment of residual paralysis consists in the many orthopedic operations which have been devised to secure the permanent correction of deformities and to improve the function of the extremities. As this is entirely a technical part of orthopedic surgery, it will not be discussed here.

Physical education is desirable to secure improvement in gait and to make the best use possible of the muscle power which remains. Games, sports, manual training and eventually specialized vocational training to fit the crippled child for an independent and a useful life are of the utmost value. These things in themselves contribute immensely to the maintenance of a normal mental and psychologic attitude toward life.

"Sheltered workshops" or similar economic stepping stones to aid the severely involved in their self support are a real need in many communities.

SOCIAL ECONOMIC CONSIDERATIONS

As can be seen from the foregoing section, the treatment of a severe poliomyelitis case is a long, intricate and costly affair. It can be economically sound if wisely supervised, for it is possible after the first few months to limit most of the effort to the few more seriously disabled persons. Recovery in the majority

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of cases is early and spontaneously completed in a few weeks or a couple of months, and such persons need not be carried on hospital rolls but can be supervised subsequently as outpatients at relatively infrequent intervals and low cost. There is also a large group who, though moderately affected, can be cared for at home after training in principles of therapy at the hospital, and their families coached in the necessary further treatments required for the individual case.

Finally, much saving can be made by combating the natural human tendency to prolong treatment beyond the reasonable recovery period in the vain hope that somehow, somewhere, nerves will be conjured up. This fallacy leads to ultimate disappointment, trial of other inadvisable treatments, waste of time, delay of final adjustment and postponement of reconstructive surgery in addition to a huge economic waste.

It should always be remembered that patients with poliomyelitis are not cured, but that they recover, and we can only assist in that recovery and try to make it as complete and perfect as possible.

Clinical Notes, Suggestions and New Instruments

RENAL DAMAGE DUE TO ISCHEMIC MUSCLE NECROSIS

MAJOR WILLIAM C. MOLONEY,
MAJOR SIDNEY L. STOVALL
and
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Medical Corps, Army of the United States

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During the present conflict, through the efforts of Bywaters [1] and other British investigators, the clinical entity variously termed the "crush syndrome" or the "ischemic muscle necrosis syndrome" has been rediscovered and investigated. The graphic picture of massive crushing injury followed by anuria and death has been well established; moreover, the concept of serious renal insult due to the release of products from damaged muscle tissue has been extended from the rather restricted group of direct compression injuries to include those important cases due to vascular occlusion. Bywaters [1] states succinctly that "the essential lesion of crushing injury is muscle necrosis: this may be due to ischemia of direct compression or it may be due to ischemia from interference with the main arterial supply by sudden spasm, thrombosis, rupture or obstruction."

TABLE 1.—*Results of Plasma and Urine Examinations* *

Date	Plasma	Urine
11/10/44	Oxyhemoglobin † Possible trace of myoglobin	No bilirubin Myoglobin † Trace of metmyoglobin
11/11/44	Oxyhemoglobin †	No bilirubin Trace of myoglobin
11/12/44	.....	Trace of myoglobin
11/13/44	.....	Just detectable trace of myoglobin

* Carried out by Dr. Hartree of Cambridge University.
† Amount not clinically significant.

Interruption of the blood supply to the extremities is frequently encountered in battle casualties. With modern methods of treatment most of these patients survive and are promptly evacuated to installations equipped to provide good surgical care. In this group of individuals, if circulation through the part is reestablished, the products of autolysis from the ischemic muscle may produce severe renal damage. Nor should it be thought that this problem is solely confined to war wounds; the tremendous volume of traumatic material from motor and industrial accidents should provide a fertile field for this type of injury in civilian practice.

The following case is presented in order to furnish an illustration of renal damage arising from ischemic muscle necrosis due to vascular occlusion, wherein myohemoglobin studies were made on the urine.

REPORT OF CASE

On the evening of Nov. 8, 1944 at about 10:20, while riding a bicycle along the road, a soldier aged 23 was struck by a motor vehicle. He was discovered unconscious and bleeding at 1 a. m. on November 9 and was removed to the hospital by ambulance. On admission he was in deep shock and there was a severe compound fracture of the right femur with a wound 8 inches long and 6 inches wide over the anterior and medial aspect of the right thigh. No other injuries were noted. Following the administration of 1,500 cc. of plasma and 500 cc. of blood the patient reacted well and the blood pressure, which was unobtainable on admission, rose to 90/60, but the right leg remained cold and pulseless and injury to the femoral vessels was suspected. At 6:45 a. m. exploration and débridement of the wound were carried out, and the femoral artery was found to be in severe spasm at the midpoint of its course through Hunter's canal. In this region there was an area of ecchymosis involving the perivascular covering of the femoral artery and vein, and the femoral vein was found to be thrombosed for a distance of at least 2 inches. There was no hematoma or laceration of the artery, and an attempt was made to relieve the extreme vasospasm by stripping the periarterial coat. This was done for a distance of about 6 inches, and procaine hydrochloride was injected into the adventitial coat of the femoral artery around its entire circumference at the upper end of Hunter's canal. Pulsation returned to a level about 1 inch above the distal end of Hunter's canal, but further stripping and procaine injection resulted in no decrease of the arterial spasm. Although another 500 cc. of blood was given during the operation, the blood pressure fell to 60/30 and the patient's condition deteriorated so that a wire was inserted through the femoral condyles for traction and the operation was terminated.

During the day, after more plasma and blood transfusions, the patient improved somewhat and the usual postoperative routine of penicillin and sulfadiazine was started. Later in the day he began to take fluids well by mouth, and during that afternoon and night he took about 1,500 cc. of water and fruit juice. Sodium bicarbonate was given orally, 2 Gm. every two hours for eight doses, in order to alkalize the urine because of the multiple transfusions. A paravertebral sympathetic block done that afternoon had no appreciable effect on the circulation of the right leg.

On the morning of November 10 the patient was in fairly good condition, but the hematocrit, which had been 38 per cent the previous day, had dropped to 27 per cent and a transfusion of 1,000 cc. of whole blood was given without untoward reaction. A urine specimen passed during the morning was sent to the laboratory for routine examination. It was a dark orange color and fairly clear. The reaction was basic, the specific gravity was 1.014, no sugar or acetone was present and albumin was 3 plus. The centrifuged sediment contained 2 to 3 red blood cells and 3 to 4 white blood cells per high power field, but the most striking feature was the presence of large numbers of pigment-containing casts. A benzidine test gave a strongly positive reaction.

It was at first suspected that a symptomless hemolytic transfusion reaction had occurred, but the blood drawn that morning showed no hemolysis, and the icterus index was 2 units (acetone method). All blood specimens had been saved in the ice box, and a recheck showed all typings and cross matchings to be correct. The patient belonged to group O and was Rh positive. That evening it was noted that edema had developed about the left ankle, but no significance was attached to this finding as there was no evidence of injury to this extremity. Sodium bicarbonate was continued in doses of 2 Gm. every two hours for eight doses, and fluids were forced by mouth.

Dr. E. G. L. Bywaters offered suggestions in the preparation of this paper. Professor Hartree made the spectroscopic studies.

1. Bywaters, E. G. L.: Ischemic Muscle Necrosis, J. A. M. A. **124**: 1103 (April 15) 1944.

On the morning of November 11 there had developed a tense, firm swelling over the posterior aspect of the lower part of the left leg. Dorsalis pedis and popliteal pulsations were not felt, but swelling made palpation difficult. A deep hematoma of the left calf muscles was suspected, and an incision was made in this region. When the fascia over the gastrocnemius was cut through the muscle mushroomed out as if it was under great pressure. No hematoma was found and the muscle appeared normal; at least no necrosis or pallor was evident. The wound was covered with petrolatum gauze and allowed to remain open. Since no improvement had taken place in the right leg, circular amputation at the level of the femoral condyles was carried out. The patient withstood the operation very well. A specimen taken from the right gastrocnemius muscle at this time showed no pathologic changes.

On November 12 the left leg improved a great deal; warmth returned as far as the toes, although no pulsation could be felt in the dorsalis pedis artery. Blebs appeared on the lower part of the left leg, and these were thought to be caused by burns from hot water bottles which had been applied on November 9 to dilate the spastic vessels reflexly in the right lower extremity.

On this date a biopsy was obtained from the swollen left gastrocnemius muscle through the incision made on November 11. Sections of this piece of muscle did not show characteristic microscopic changes.[2] Bywaters and Beall [3] point out that in ischemia due to arterial spasm patchy necrosis may occur. It is possible that if more extensive biopsy material had been obtained in the present case evidence of muscle necrosis might have been found.

With the discovery of the urinary findings on November 10 the nature of the renal damage was suspected. The specimen of urine passed on the morning of November 10 with urine specimens from the 11th, 12th and 13th and plasma specimens taken on the 10th and 11th were submitted to Cambridge University for spectroscopy. The results of these studies, as seen in table 1, proved that the urinary pigment was myoglobin and not oxyhemoglobin. This finding substantiated the clinical diagnosis of renal damage from ischemic muscle necrosis. As shown in table 2, the albumin and casts, as well as the positive benzidine reaction, quickly cleared from the urine. The patient maintained a urinary output of over 1,500 cc. daily and the reaction remained basic most of the time. A mild degree of nitrogen retention developed, the highest nonprotein nitrogen level being 50 mg. per hundred cubic centimeters, but from the renal standpoint the patient made a rapid recovery with no evidence of residual kidney damage.

Following the incision of the fascia in the left leg on November 11, daily left paravertebral sympathetic blocks were carried out and the extremity seemed to be well on the way to recovery. Suddenly however on November 17 the left foot became cyanotic and painful. A line of demarcation developed and on December 6 the distal third of the left foot was amputated. Following this episode the patient made a slow but steady recovery.

TABLE 2.—*Laboratory Examinations*

	Blood				Urine				
Date	Hemoglobin, Gm. per 100 Cc.	Hematocrit, %	Nonprotein Nitrogen, Mg. per 100 Cc.	Icterus Index *	Reaction	Specific Gravity	Albumin	Benzidine	Microscopic
11/ 9/44	12	36	..	...	.....	.....	.....	.....	.....
11/ 9/44	13	38	..	...	.....	.....	.....	.....	.....
11/10/44	9	27	44	2U	Basic	1.014	+++	++++	Large number of pigment casts
11/12/44	9	27	40	2U	Basic	.....	++	+++	Occasional cast
11/12/44	10	30	..	...	Acid	.....	+	+	Occasional cast
11/13/44	9	25	27	3U	Basic	1.020	±	0	Negative
11/14/44	10	29	..	...	Basic	1.008	Spt.	0	Negative
11/15/44	11	32	..	...	Basic	1.009	Spt.	0	Negative
11/16/44	..	..	50	...	.....	.....	.....	.....	.....
11/17/44	..	..	47	...	.....	.....	.....	.....	.....
11/18/44	12	35	40	...	Acid	1.020	0	.....	Negative
11/19/44	10	30	31	...	Basic	1.018	0	.....	Many granular casts
11/22/44	..	29	..	...	Basic	1.014	0	.....	Negative
11/24/44	11	32	..	...	.....	.....	.....	.....	.....
11/25/44	10	31	..	...	Acid	1.015	Spt.	.....	Negative
11/27/44	9	27	..	...	Acid	1.015	Spt.	.....	Negative
12/ 8/44	12	35	35	...	Basic	1.020	0	.....	Negative

* Acetone method used for icterus index (normal range 1 to 3 units).

COMMENT

Although cases of renal damage following vascular occlusion have been reported by British clinicians [4] there has been no widespread recognition of this condition in the American literature. Since renal injury of this type frequently has a fatal termination, prompt diagnosis is imperative and therapy directed toward prevention of renal damage should be instituted as early as possible.

In the case reported in this paper, in all probability, ischemia of muscle developed in the left leg following arterial spasm which was reflexly initiated in the injured right leg.[5] After recovery from shock and with partial return of circulation to the left lower extremity, toxic muscle products were carried to the kidney, causing renal damage. The nature of the toxic factor is not clearly understood; however, Bywaters [1] states that in the treatment of this condition "the first and most urgent step is an attempt to guard against renal failure by the establishment of an alkaline diuresis." In this case early alkalization of the patient may have enhanced the passage of toxic substances through the kidney and prevented serious renal injury.

In traumatized patients the possibility of renal damage should be kept in mind, not only in the obvious crushing and compression injuries, but also in the ischemia arising from more occult forms of vascular occlusion. Simple examination of the urine by the benzidine test and the study of the centrifuged urinary sediment should never be neglected and may provide, as in the case reported, valuable clues to the diagnosis of muscle damage and renal injury. Whenever feasible, urine specimens should be sent to laboratories equipped to do spectroscopic studies on hemoglobin and myoglobin pigments. Every effort to carry out other chemical and pathologic examinations should be made in order to shed all the light possible on this still obscure but important problem.

SUMMARY

1. Ischemic muscle necrosis followed arterial occlusion, probably initiated by reflex vascular spasm.

2. In this case serious renal damage may have been prevented by the early alkalization of the urine.

3. This case illustrates the importance of the examination of the urine in the diagnosis of renal injury due to ischemic muscle necrosis.

2. Bywaters, E. G. L., and Dible, J. M.: The Renal Lesion in Traumatic Anuria, J. Path. and Bact. **50**:111 (Jan.) 1942.

3. Bywaters, E. G. L., and Beall, D.: Crush Injuries with Impairment of Renal Function, Brit. M. J. **1**:427 March 23) 1941.

4. Glenn, A. M.: Temporary Vascular Occlusion Ending Fatally in Uremia, Brit. M. J. **2**:875 (Dec. 20) 1941. Bywaters.[1]

5. Barnes, J. M., and Trueta, J.: Arterial Spasm, Brit. J. Surg. **30**:74 (July) 1942.

Council on Pharmacy and Chemistry and the Council on Industrial Health

A large number of inquiries concerning a product designated as Formula A-N-1, of the Benson Laboratories, have been received over the past year by the offices of both the Council on Industrial Health and the Council on Pharmacy and Chemistry. The unrestrained promotion of this preparation to reputable business concerns warrants statement by the two Councils concerned.

The Council on Pharmacy and Chemistry and the Council on Industrial Health have therefore authorized publication of the following report.

AUSTIN SMITH, M.D., *Secretary,*
COUNCIL ON PHARMACY AND CHEMISTRY.

C. M. PETERSON, M.D., *Secretary,*
COUNCIL ON INDUSTRIAL HEALTH.

FORMULA A-N-1 (BENSON LABORATORIES): OLD HOKUM IN NEW DISGUISE

A product known as Formula A-N-1, which consists of a package of two powder-containing envelops, one blue and one white (to the contents of which hot water is added to produce an effervescent mixture), is sold to business organizations by the Benson Laboratories of Pittsburgh for the use of employees in the treatment of symptoms due to colds. The product has been promoted by direct mail advertising to representatives of private and public service companies or corporations. The promoters refuse to fill orders for resale to an individual, with the excuse that this would cause trouble with the Post Office Department because the advertising carries a statement restricting sales to business organizations for the use of employees.

Until recently (and then only through the cooperation of extramural sources) it was not possible to secure samples of the product for examination, despite two separate written requests sent to the manufacturer for specimens and information. One request was sent by registered mail. Examination of the product and consideration of the promoter's claims for its efficacy in aborting the symptoms of the common cold were undertaken because of the comparatively large number of inquiries received by the Council on Industrial Health and the Council on Pharmacy and Chemistry from business organizations and physicians.

Until recently a promotional letter sent out by the firm offered to furnish a trial quantity of the product "for colds," claiming that it was "made of citric acid and the more important elements of vegetables and fruits," and that absenteeism caused by colds could be reduced about 80 per cent. A form letter recently sent to organizations reads as follows:

SUBJECT: COLDS AND THE AMERICAN GAS ASS'N REPORT

The American Gas Association made a report last year to the War Manpower Commission concerning the conservation of manpower. Some extracts from this report (shown on the next attached sheet which you should read) show how Formula A-N-1 for headaches, throat irritations and muscular aches and pains, which accompany Colds has played an important part in this conservation. A-N-1 is the only remedy of any kind mentioned in the entire report.

Formula A-N-1 is sold only to corporations and for the specific purpose of helping reduce absences among employees. On account of its high record of effectiveness it is an ideal product for aiding that result.

A-N-1 contains none of the injurious drugs—has a pleasant taste—is used only when the cold is present, so that it is not necessary to go to the expense of giving it to the entire group. The average cost is about 35 cents per Cold. The corporations, users of A-N-1 whose names appear on the attached sheets have given us permission to use their names.

Summer colds are aggravating but A-N-1 seems to be just as effective on them as on Winter Colds.

This is no time for key men to be absent and if conservation of manpower is important to your organization, we suggest you fill out and return the enclosed order form—NOW.

Very truly yours,
BENSON LABORATORIES
(Signed)
P. S. CHAMBERS, President.

PSC:D

PURCHASE PRICE REFUNDED

P. S. After you have given Formula A-N-1 a fair trial, if it has not produced results which are entirely satisfactory to you let us know and we shall immediately return the entire purchase price.

The attached sheet of extracts from the report of the American Gas Association mentioned in the firm's letter contains only three quoted statements from the full report (published by *Gas Age* on Feb. 8 and 22, 1945), the last of which reads ". . . Efforts to control Colds by prompt use of the Formula A-N-1 made by Benson Laboratories of Pittsburgh have been found very effective." This is concluded with the following notation by the firm: "(Formula A-N-1 is the only remedy of any kind mentioned in the entire report.)"

The firm's letter is also accompanied by a two page list of users of the product, each of which has been recently preceded by the statement that, "Since these companies gave us permission to use their names, an improvement has been made in Formula A-N-1." The list, which seems to be subject to current change in the number and names of users, formerly carried a footnote (now deleted) to the effect that while the prospective consumer was at liberty to contact any of the companies on the list, a trial of the product might be made first and then, if it was felt necessary, a communication sent to the users. The note added, however, a disclaimer that the mounting numbers of inquiries might constitute a burden to the concerns listed!

The order form lists quantity prices ranging from $10 for 100 doses to $315 for 5,000. On the basis of the quoted price of $75 per thousand the present form letter statement that the average cost per cold is about 35 cents is just another way of saying that 4⅔ doses are the average number needed. According to the postscript the firm apparently now prefers to offer a refund for dissatisfaction rather than the formerly offered initial free trial.

The firm also distributes a recently revised, printed sheet of directions for use, presumably intended (as formerly) to be posted conspicuously in the place of business of the organization that purchases the product for its employees:

FORMULA A-N-1

FOR HEADACHES, MUSCULAR ACHES AND PAINS AND MINOR THROAT IRRITATIONS DUE TO COLDS

Formula A-N-1, made by Benson Laboratories of Pittsburgh, Pa., is available to all employees at.....
(Place)

Formula A-N-1 is a pleasant tasting effervescent powder containing ingredients of high purity. The powders are analgesic and alkalizing. A-N-1 contains no ingredient classified as an injurious or dangerous drug.

The best time to use A-N-1 is on

THE FIRST INDICATION OF A COLD

That means the first sneeze or chilliness or cough, or any symptom that seems to be the forerunner of a Cold. By using A-N-1 *at once*, the A-N-1 powders get in their work to overcome headaches, muscular aches and pains and minor throat irritations usually present in cases of Colds.

Also by so doing you receive the benefits of their alkalizing action.

Periodic reports which we receive from corporations indicate that four to five doses is the average amount necessary to obtain the benefits of Formula A-N-1.

Some cases will require more. *Do not hesitate to use whatever amount is necessary up to 8 doses.* We suggest a limit of 8 doses because we believe that any person who has taken 8 doses without noticeable effect will not at that particular time be affected by additional doses. However, experience has shown that absence of results at any particular time is no indication of lack of results the next time. The next time results may be satisfactory.

Be sure to use the entire contents of both envelops.

Follow instructions as printed on the dose package and *don't delay using A-N-1 when you have a Cold.* Take every possible precaution to avoid complications. Colds in themselves are seldom if ever fatal. However, complications that develop take a high toll of lives each year.

BENSON LABORATORIES
April 11, 1946 Pittsburgh, Pennsylvania

This direction sheet formerly bore the title "FOR COLDS," made reference to the composition of the product as the chief mineral elements of fruit and vegetables (with the explanation that citric acid is the chief constituent of lemon juice) and advanced the claims that its use at the first symptom was likely to eliminate the common cold more quickly and that an average of 4½ doses would eliminate about 80 per cent of colds.

In the revised direction sheet reference to fruits and vegetables and claims for 80 per cent efficiency in the reduction of employee absenteeism caused by colds are notably absent. Can this be because of the so-called "improvement" in the product, an improvement which consists essentially in the addition of aspirin to the "formula"?

Formerly the envelops were labeled with the caption "Formula A-N-1 For Colds" and bore recommendations for one dose

(contents of white and blue envelops) every hour for three doses, then every two hours if more is necessary. The envelop also included the following statements: "Formula A-N-1 contains the more important mineral elements which are contained in vegetables and fruits. The form in which they occur is as follows: Sodium Bicarbonate, Potassium Bicarbonate, Lithium Citrate, Calcium Carbonate, Magnesium Carbonate, Ferric (Iron) Sulphate, combined with Citric Acid." Recently, with the change in composition, the labeling of the envelops has been changed to omit the words "For Colds" from the caption, to add aspirin to the list of ingredients, to recommend a limit on the number of doses to not more than eight in any twenty-four hour period and to alter the descriptive statements to read as follows: "Effervescent analgesic alkalizing powder. For headaches and muscular aches and pains and minor throat irritations accompanying the Common Cold."

Evidently, the addition of aspirin offers a convenient means by which the manufacturer hopes to bring the claims into line with federal drug regulations. Its promotional letter, advertising and labeling no longer directly imply that the product is a specific remedy for colds or that it may actually abort the symptoms of a cold. Removal of the reference to vegetables and fruits seems to be a similarly "inspired" attempt to remove the product from the nostrum class. That this has been more or less futile is obvious from the following history of similar products, sold under similar conditions with equally meaningless names:

In 1928 the Bureau of Investigation of the American Medical Association published a report exposing the sale for $2 of twelve tubes (each containing two powders in separate compartments) of what essentially was 10 cents' worth of citric acid and baking soda marketed under the name AL-14 by a concern known variously as the American Chemical Company and the Research Laboratories of Pittsburgh, which had for manager and vice president one P. S. Chambers. A report of the Bureau [1] two years later giving the foregoing review of AL-14 disclosed 4 cases of nonfatal poisoning following the ingestion of a similar remedy for colds marketed under the name FC-100 by the Food Chemistry Corporation of Pittsburgh, which also had a P. S. Chambers as manager and vice president. The report pointed out that both products were promoted through appeals to executives of larger business concerns and that, except for the arsenic contained in FC-100, the A. M. A. Chemical Laboratory had found the composition to be essentially the same: namely, an effervescent mixture consisting of citric acid and potassium and sodium bicarbonates, along with traces of calcium and magnesium. The report concluded by pointing out that the Bureau, in reply to a bank president's request for information on FC-100, had suggested that there was no more justification for bank executives to dose their employees with nostrums of secret composition than there would be for medical executives to recommend the purchase of wild-cat stock by their employees.

The A. M. A. Bureau of Investigation first heard of Formula A-N-1 in February 1937, when it was informed that the product was originally marketed under the name FC-100 by the Food Chemistry Corporation and that this concern had recently changed its name to American National Health System, at the same time releasing the formula of its product to the Benson Laboratories. In 1943 the Bureau received from an inquirer a specimen of "Formula A-N-1 For Colds" as described. The A. M. A. Chemical Laboratory found by spectroscopic examination that the blue envelop contained a white powder consisting of sodium, potassium, lithium, calcium and magnesium and that qualitative chemical tests indicated the presence of carbonates. The white envelop also contained a white powder that qualitative chemical tests indicated to consist of citric acid and a small amount of iron. The chemical results were summed up as follows:

These findings generally confirm the presence of the ingredients stated on the label. The admixture of the contents of the blue and white envelops in hot water results in the formation of the citrate salts of the bicarbonates and carbonates, with the evolution of carbon dioxide. The latter is evolved during the effervescence of the mixture immediately after carrying out the directions for use.

1. Bureau of Investigation: FC-100, Using Bank Executives as an Adjunct to Quackery, J. A. M. A. **94**: 1010 (March 29) 1930.

It seemed evident that Formula A-N-1 is simply the successor to FC-100 and AL-14, nostrums which long ago were similarly promoted under the guiding "spirit" of a P. S. Chambers, a name borne by the president of the Benson Laboratories, promoters of Formula A-N-1. It is intriguing to contemplate how many organizations that may have purchased FC-100 and/or AL-14 are now counted among the lists of users distributed for Formula A-N-1.

According to the latest lists compiled by the current promotional concern, the users now comprise a total of eighty business organizations. From forty-five of these the Council on Pharmacy and Chemistry has received replies to a letter requesting a résumé of the evidence, if any, on which the firm accepted use of the product for its employees. One concern stated that it was unaware that its name was being circulated by the manufacturer until it had received the Council's inquiry. Most of the replies indicated that the firms had purchased the product on the recommendation of other users, not on the basis of any evidence gathered by a medical consultant, and were continuing its use on the basis of employee cooperation and claimed satisfactory results extending over periods ranging up to several years. A few felt that the product had reduced employee absenteeism, especially when used in the early stages of a cold; some that it merely relieved the discomfort accompanying colds; others that orders for the product had not been renewed because employees did not request it. One large user of the product expressed the belief that the same results would be obtained by using just plain lemon juice and water but preferred the convenience of the formula. Another concern had discontinued it because of the cost but otherwise felt it to be effective. Still another reported indifferent success. By and large, the replies constituted simply "testimonials" of the manufacturer's claims. Only one concern offered any actual data, reporting that in 10 cases (averaging five doses per cold) absenteeism was prevented, while during the same period other employees not using the treatment were absent from work because of illness. The number of employees not taking the treatment was not indicated and there was no evidence to show that in an equal number of untreated colds the results would have been different. In nearly all instances the concerns were without any medical supervision, with at most a nurse in charge; physicians' opinions, rarely included, were altogether noncommittal.

The purchase of a powdered mixture of alkalis, citric acid and iron by business concerns for the mass treatment of employees' colds on the basis of such evidence is typical of the guileless manner in which the lay public is prone to accept the extravagant claims made for cunningly and appealingly advertised remedies. There is not a shred of scientific evidence to show that such a mixture will shorten the duration of the common cold. The widespread lay concept that routine systemic alkalization will relieve or lessen the symptoms of colds is sheer nonsense. While it is true that citrus fruits (or their juices) may induce alkalinity of the urine by virtue of the fact that citric acid is metabolized and excreted in the form of alkaline carbonate, there is no evidence to indicate that this is rational treatment for colds other than as a means to encourage adequate intake of fluid in the presence of an infection.

Specimens of Formula A-N-1 with the new labeling, listing aspirin as an additional ingredient, have recently been examined by the A. M. A. Chemical Laboratory. Its findings are as follows:

Qualitative analyses of recently obtained specimens of Formula A-N-1* confirm the presence of ingredients stated in the labeling. The blue envelops were found to contain carbonates and bicarbonates of sodium, potassium, calcium, magnesium and lithium, with a trace of organic material. The white envelops were found to contain citric acid, acetylsalicylic acid and a small amount of iron salt. The average amount of aspirin found was 2.15 per cent of the weight of the contents of the white envelop, equivalent to 0.108 Gm. (1⅔ grains) per envelop.

This latest report of the Laboratory again relates the essential identity in composition of Formula A-N-1 (except for the added aspirin) with its illustrious predecessors, FC-100 and AL-14. The small amount of aspirin present is likely to provide some analgesic relief from the general malaise that often accompanies the common cold, but it would be much more simple to take a 5 grain tablet as needed. That faith in the original "formula" should have remained unshaken for these many years

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is primarily a "tribute" to the effectiveness of clever manipulation and advertising over enthusiastic but medically uninformed users.

While the aspirin component may be considered a unique departure, the previous ingenuity of the promoter seems to have been confined to the choice of new names for the old "formula" and of titles for concerns to market it. Switching names of product, formula, promoter and/or address is a procedure long established in the marketing of concoctions such as this. The methods employed to continue such "rackets" are no less amazing than the "sucker" lists offering names of those who unknowingly but willingly lend their support by continued purchase. In the case of Formula A-N-1, the former statement that the product contains the more important minerals contained in fruits and vegetables smacks decidedly of the promotional pseudoscience used for other widely promoted remedies.

Even as this report was being considered there was referred to the office of the Council on Pharmacy and Chemistry a still later version of the promotional letter for the product, addressed to the governor of one of the states, signed by the aforementioned president of the concern, P. S. Chambers. In it reference is made to its use by banks as well as by public service companies with the suggestion that the departments of state government will find A-N-1 "an ideal product" for aiding reduction of absences caused by colds. It is hoped that other executives of governing bodies that may be importuned to use the product will exercise the good judgment shown by the governor in seeking competent medical advice before purchasing it.

Formula A-N-1 as a treatment for colds, at best is an expensive, poor substitute for aspirin and citrate of magnesia (Solution of Magnesium Citrate, U. S. P.), only the former of which can be expected to relieve some of the symptoms of the common cold. The Councils on Pharmacy and Chemistry and Industrial Health suggest that if business organizations desire to furnish symptomatic treatment for colds of employees they would be well advised to consult competent medical authority and act according to its advice. The appallingly impressive list of reputable concerns that have embarked on a program to reduce employee absenteeism due to colds through the use of Formula A-N-1 or its predecessors can only be attributed to a lack of adequate medical supervision. It is hoped that the questionable claims offered on behalf of this product will focus attention on the need for seeking competent medical advice before some passing health fad or exploited nostrum is accepted.

Council on Pharmacy and Chemistry

REPORTS OF THE COUNCIL

The Council has authorized publication of the following statements.

AUSTIN SMITH, M.D., Secretary.

THE ACCEPTANCE OF PRODUCTS OF FIRMS FORMERLY NOT REPRESENTED IN NEW AND NONOFFICIAL REMEDIES

With the adoption of its new rules,[1] the Council on Pharmacy and Chemistry abandoned certain of the old rules, one of which was concerned with the overall promotional activity of firms submitting products for inclusion in New and Nonofficial Remedies. This does not mean that the Council is receding from its efforts to encourage the ethical and honest promotion of worthwhile therapeutic agents; to the contrary, it is intended to make these efforts more effective by taking advantage of the changing attitude of the drug trade. When the rule was originally adopted, a considerable proportion of pharmaceutical manufacturing firms placed much more emphasis on the exploitation of remedies for profit to the business than for profit to the patient, using a few better articles for "window dressing" rather than for serious promotion. The Council aimed to improve this situation by insisting that the major business of a firm should be in acceptable articles before any of its articles would be accepted by the Council. An increasing number of these firms have made commendable efforts to bring their policies in line with the objectives of the Council. This has been aided by the recent phenomenal developments in positive therapeutics which substitute striking improvement, demonstrable by rigorous methods, for the wishful empiricism of galenic fancies and render these even financially unprofitable.

The Council feels that it may safely take advantage of this improved situation and that it can do more good by aiding all firms to increase their proportion of acceptable products than by fighting a foe that is already vanquished. So the Council hopes, at least, but with a watchful eye to conditions. If its hopes should prove too optimistic, it can return to more restrictive policies.

1. Revision of the Rules of the Council on Pharmacy and Chemistry J. A. M. A. **131**:215-219 (May 18) 1946.

PENICILLIN FACTS AND RUMORS

Recent articles in periodicals of wide circulation have created unwarranted fears in the minds of the public concerning the value of penicillin and other new remedies.

Unfortunately, some of the articles are factually incorrect. The creation of doubts and fears in the minds of patients concerning the therapy which they receive may prevent the fullest realization of benefits from treatment.

Physicians should be in a position to give their patients the facts concerning penicillin and to allay any doubts or fears created by these publications. Briefly, the facts concerning the latest developments in penicillin therapy are as follows:

1. Commercial penicillin has consisted of varying mixtures of one or more of the five known fractions, F, G, X, K and dihydro F.

2. Penicillin K is apparently rapidly destroyed or eliminated in the body, and therapeutic levels are not achieved or maintained in the body fluids following ordinary doses.

3. Commercial penicillin now available is predominantly penicillin G, which is known to be effective although some of the penicillin produced for a few months in 1945 may have had relatively less G and more K than previous or subsequent batches.

4. As far as facts are available, penicillins F and X are as active clinically as penicillin G. Further research will be necessary to define their usefulness with preciseness.

5. Since precise methods are not available for the routine determination of the quantities of each fraction in each batch of penicillin, the National Research Council has recommended increased dosage of penicillin as a safety precaution, particularly in the treatment of syphilis, in which the end result of therapy cannot be evaluated for a long time.

6. Although bacteria have been made resistant to penicillin in the test tube, development of clinical resistance has not become a problem. Such an eventuality may be prevented, in part, by giving adequate and not minimum doses of penicillin.

7. All penicillin and penicillin pharmaceuticals currently on the market have been examined and certified as to safety and efficacy by the United States Food and Drug Administration.

8. It is possible that natural or synthetic variations of the penicillin molecule will result in the development of a clinically better penicillin. None better than penicillin G is now available.

While it is realized that the rapid developments now being made in therapeutics make it increasingly difficult for busy physicians to read and evaluate the many scientific articles appearing in hundreds of periodicals, the physician can keep himself informed of the more important developments through a study of the Reports of the Council on Pharmacy and Chemistry. Furthermore, the Council office and its personnel are always ready to answer inquiries and furnish information on drugs and therapeutic agents. Physicians, by using this service, can allay the fears of their patients who have come to doubt the efficacy of penicillin even when properly used.

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SATURDAY, AUGUST 24, 1946

THE HEARINGS ON THE WAGNER-MURRAY-DINGELL BILL

In this issue of THE JOURNAL appears the final instalment of the hearings on the Wagner-Murray-Dingell bill, the publication of which has been continued in THE JOURNAL since May. THE JOURNAL suggested, in reporting the first day of this extraordinary manifestation of the workings of a democracy, that the whole performance had been developed by Messrs. Wagner, Murray, Pepper, Dingell et al.—which includes, of course, their associates, such as employees of the Social Security Board and Michael Davis—as propaganda in behalf of the contemplated legislation. An analysis of the hearings indicates that more persons were heard favorable to the legislation than unfavorable and that many of those unfavorable to the legislation who were of professional or public stature equal to or greater than those who appeared for it were not permitted to have their say. The technics employed in conducting these hearings might well be considered a foretaste of the operations of national compulsory sickness insurance if the Wagner-Murray-Dingell bill should be enacted.

Evidence brought out in the hearings through the astute questioning of Senator Donnell revealed the nature of the little groups marshaled behind the legislation, including the so-called Committee on the Nation's Health, the Committee for Medical Care and the Physicians Forum. Pitiful, indeed, was the exhibition by Dr. Channing Frothingham, whose testimony revealed how he was made a front for the propaganda group assembled by Michael Davis and how little he knew of the actual workings of the organization that he heads. Apparently he was unable to remember the names of his associates; after condemning the writings of some of those opposed to the measure, he indicated that he had never read them.

The hearings served, moreover, to bring to light the problems that the medical profession must face and the persons who use public office to exalt their bureaucracies. There too were the executive secretaries of various pressure groups who presume to speak for considerable numbers of people whose views they have never ascertained.

The incisive questioning by Senator Donnell established definitely that there can be no free choice of physician by patient under any government controlled medical service, that nationalization lends itself to the political degradation of medical practice, that it makes the politician the important figure in medical care, that it takes from the physician his right to practice his profession as a scientist and that it is in every sense a "taking over of medicine by the state."

Outstanding also were the comments even by those who opposed the point of view of the American Medical Association—and, incidentally, of the vast majority of American physicians—indicating their recognition of the high scientific status of the medical profession, their respect for physicians as a profession, their esteem for the publications of the American Medical Association and their recognition that it was the physicians themselves, through their organization, that raised the standards of medical education, improved the quality of our hospitals, eliminated quackery, promoted scientific research, participated with public health officials in lowering sickness and death rates and made possible through their magnificent service in the armed forces the winning of the war.

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X-RAY STIMULATION OF PHAGOCYTOSIS

Clinical records contain numerous conflicting reports as to the effects of x-rays in the treatment of specific infectious diseases. Glenn [1] of the department of radiology, Duke University, studied the effects of various types of x-ray exposure on the phagocytic indexes of rabbits. With a modification of the Ward-Enders [2] technic he found that the phagocytic indexes of 40 untreated or preirradiated rabbits averaged 9.6, Staphylococcus aureus being used as the test organism. Rabbits were then exposed to x-rays in groups of 4. All animals received the same dose of x-rays (100 roentgens measured in air) over the inner surface of the left hind leg through a 6 by 6 cm. port. At various intervals after irradiation the phagocytic indexes were determined from blood specimens obtained from the marginal ear veins. In a typical experiment groups of rabbits were given a 100 roentgen dose (air) delivered at 140 kilovolts. Twenty-four hours later the average phagocytic index had risen. During the next twenty-four hours the average index increased to 65.0, or about seven times normal. After reaching this maximum the index fell to 40.0 by the end of three days, to 25.0 by the end of four days and to slightly above the preirradiation level by the end of two weeks.

There is thus a transient but highly significant rise in phagocytic titer between the first and the fourth

1. Glenn, John C., Jr.: J. Immunol. **52**: 65, **53**: 95, 1946.
2. Ward, H. K., and Enders, J. F.: J. Exper. Med. **57**: 527, 1933.

day, the maximum being reached on the second day. In 1942 Bisgard and his associates [3] were able to protect a certain number of rabbits from lethal doses of diphtheria toxin when the animals were given x-rays in varying doses, particularly when irradiation was given forty-eight hours before injection of the toxin.

Glenn found that repetition of the standard dose (140 kilovolts) at twenty-four to forty-eight hour intervals produces a still further increase in the phagocytic index. This higher index can be maintained for about six days but not indefinitely. In addition to the time element, the rise in the phagocytic index varies with the kilovoltage. With a 100 roentgen dose (air) delivered at 50-90 kilovolts there is practically no change in phagocytic titer by the end of forty-eight hours. With 200 kilovolts irradiation is only half as effective as with 140 kilovolts. From 400 to 1,000 kilovolts there is practically no increase, and there may be a decrease in the normal phagocytic index.

Since whole citrated blood was used in determining the phagocytic indexes, conclusions cannot be drawn as to whether or not the effect of irradiation is on the antibody producing mechanism, on the leukocytes or on the plasma or is a result of denaturation of local tissue proteins. The data presented are of suggested clinical interest mainly in that the time interval and kilovoltage producing the maximum immunologic effect in rabbits have been determined.

TESTOSTERONE IN THE TREATMENT OF ADVANCED CARCINOMA OF THE BREAST

Lacassagne [1] has demonstrated that continued administration of estrone to young male rats belonging to a strain whose females are predisposed to mammary cancer will produce an adenocarcinoma of the breast in the majority of the males thus treated. Similar results were obtained by Loeb and his associates.[2] Nathanson and Andervont [3] were able to prevent the development of tumors in female mice of a strain with a high predisposition to cancer by administration of testosterone. The hormone had no effect on the growth of spontaneous mammary carcinoma in the female of this strain. Lacassagne suggested that, if adenocarcinoma of the breast is the consequence of a special hereditary sensitivity to the proliferative action of estrone, a therapeutic preventive might be found in an antagonistic hormone. Ulrich [4] reported remarkable improvement in a case of advanced inoperable carcinoma of the left breast and of advanced chronic mastitis (precancerous stage) of the right breast in a woman aged 45. In a case of inoperable carcinoma of the right breast and an operable malignant tumor of the left breast associated with a large bleeding uterine fibroma, Ulrich performed a hysterectomy and removal of both ovaries. He followed the operation by administering massive doses of testosterone. The improvement in the status of the right breast was such as to render the condition operable. Six women who had a family history of breast cancer and had had their breasts amputated for advanced carcinoma were treated by Loeser [5] with implantation of testosterone propionate or progesterone or both. At the time of implantation recurrences were present in 3, and, though 2 of these improved temporarily in general health, the progress of the cancer was not checked. In the other 3 patients neither recurrences nor metastases were present at the time of implantation and have not appeared in the subsequent five years. Loeser suggests that androgen should be implanted in the operation site when the breast is removed for carcinoma and implantation should be repeated when signs of masculinization disappear. Fels [6] reports a remarkable improvement in a patient with advanced carcinoma of the breast with palpable nodules in the skin and skeletal metastasis. He felt that the improvement obtained in this particular case could be attributed solely to the testosterone propionate.

Adair and Herrmann,[7] who administered large doses of testosterone propionate in 11 cases of advanced breast cancer, did not observe any toxic effects in patients with normal serum calcium level, each of whom received several thousand milligrams of testosterone propionate over a period of three months. Four patients, 1 with soft tissue and 3 with bone metastasis, manifested remarkable improvement. The evidence of improvement was seen in the regression of the primary lesions and soft tissue metastasis in 1 case and in an increase in calcification in areas of osseous metastasis in 3 cases. Disappearance of pain coincided with the osteoblastic changes. In 2 of the cases that exhibited deposition of calcium in the bone metastasis there was a coincidental elevation of the serum alkaline phosphatase.

In certain instances of advanced carcinoma of the female breast with metastasis, large doses of testosterone propionate apparently exert a favorable influence. The duration of the favorable response and the amount of the substance necessary to maintain this improved status have not been established.

3. Bisgard, J. D.; Hunt, H. B.; Neely, O. A., and Scott, Paul: Ann. Surg. **115**: 996, 1942.

1. Lacassagne, A.: Hormonal Pathogenesis of Adenocarcinoma of the Breast, Am. J. Cancer **27**: 217 (June) 1936.

2. Loeb, L.; Suntzeff, V.; Burns, E. L., and Maskop, Marian: Effect of Injections of Estrin on the Incidence of Mammary Cancer in Various Strains of Mice, Am. J. Cancer **27**: 229 (June) 1936.

3. Nathanson, Ira T., and Andervont, H. B.: Effect of Testosterone Propionate on Development and Growth of Mammary Carcinoma in Female Mice, Proc. Soc. Exper. Biol. & Med. **40**: 421 (March) 1939.

4. Ulrich, P.: Testosterone (hormone mâle) et son rôle possible dans le traitement de certains cancers du Sein, Unio. Internat. Contra Cancrum **4**: 277, 1939.

5. Loeser, A. A.: Mammary Carcinoma: Response to Implantation of Male Hormone and Progesterone, Lancet **2**: 698 (Dec. 6) 1941.

6. Fels, E.: Treatment of Breast Cancer with Testosterone Propionate: Preliminary Report, J. Clin. Endocrinol. **4**: 121 March) 1944.

7. Adair, F. E., and Herrmann, J. B.: Use of Testosterone Propionate in the Treatment of Advanced Carcinoma of the Breast, Ann. Surg. **123**: 1023 (June) 1946.

Current Comment

MINERAL OIL IN FOODS

The high prices and the scarcity of edible oils have apparently resulted in an increased use of mineral oil in foods. Attention has been called recently to the occurrence of fecal incontinence due to the ingestion of excessive quantities of mineral oil by unsuspecting patrons of restaurants where mineral oil has been substituted for edible oils in salad dressings.[1] The Council on Foods and Nutrition [2] called attention to the harmful effects of mineral oil in foods in the following paragraph:

> It has been shown that the ingestion of liquid petrolatum is capable of interfering seriously with the absorption of carotene, vitamin D, calcium and phosphorus and vitamin K. The effects of its prolonged use have not been thoroughly investigated, but there is sufficient evidence of possible harmful effects to justify the conclusion that its indiscriminate use in foods or in cooking is not in the interest of good nutrition, and any such use should be under careful supervision of a physician.

In reply to inquiries about the legality of mineral oil in salad dressings the Food and Drug Administration [3] has expressed the opinion that "mineral oil salad dressings must be regarded as adulterated under the Federal Food, Drug and Cosmetic Act under any form of labeling employed." Mineral oil should certainly not be used except under the supervision of a physician familiar with the problems involved and should not be used indiscriminately in foods.

RADIO DRAMATIZATIONS ON MENTAL HEALTH

The National Mental Health Foundation in a press release [1] announces a series of professionally produced radio plays intended to educate listeners to a sound and sympathetic approach toward mental illness and related problems. Such dramatizations on fifteen minute electrical transcriptions will be released each month beginning in September. The first case is the dramatized story of Louise Mapleton, intended to demonstrate what efficient treatment in a well equipped state hospital can do for the early stages of mental illness. The second platter will be devoted to the possibilities in foster home care for a convalescent patient. The third program deals with the problems of a fully recovered mental patient who meets with prejudice on his return to community living. The recordings will be introduced by Miss Helen Hayes, well known actress. The scripts have been reviewed by psychiatric consultants and by the National Broadcasting Company. The recordings are available both for broadcasting and for use at meetings. Requests should be addressed to the National Mental Health Foundation at the address below. The use of the dramatic form in radio health broadcasting has been a practice of the American Medical Association since 1935. Electrical transcriptions were first made available by the Association in 1944. Broadcasting by local medical societies from these transcriptions included three thousand local broadcasts in 1945, and the 1946 rate is in excess of that number. The American Medical Association made available in 1945 a series of mental health broadcasts entitled "Why Do You Worry?" It consisted of thirteeen programs, each dealing with common, everyday problems in mental hygiene and adjustments rather than with mental diseases, as do the platters now offered by the National Mental Health Foundation. The format of the two series, as well as the subjects, is different. There is room for both series in any community. The American Medical Association welcomes all such contributions to health education.

REDUCTION IN TRAFFIC DEATHS

The National Committee for Traffic Safety, consisting of approximately one hundred organizations including the American Medical Association, in its *News Letter* [1] points to an improvement in lowering traffic fatalities. In May 1946 the National Safety Council reported traffic fatality figures which showed a 36 per cent increase over those killed in the same period in 1945 but a 21 per cent decrease under the record of May 1941. The latter is presumably a more comparable month, since in May of both 1941 and 1946 there were no restrictions on travel. In 1946 old cars and worn tires might have explained an increase rather than a decrease. There are other isolated indications; traffic deaths of the July Fourth week end holidays were almost 19 per cent less than was expected; there were no highway fatalities in the state of Connecticut for the first eight days of July 1946. The American Medical Association is pledged by its platform to participate in all life saving endeavors. State and county medical societies are requested to cooperate at the state and local level respectively. Governors of states have been asked to call highway safety conferences to which representatives of the medical profession will undoubtedly be invited. Through their society organs and bulletins, their press contacts, radio programs and speakers to lay groups organized medicine can give powerful organized support to the traffic safety movement by helping to build up local consciousness and insistence on safe driving locally. As motorists, to whom safe highways are vital in the practice of their profession, doctors can show the way by safe and responsible driving and by refraining from taking advantage of professional immunity to create highway hazards even in emergencies. Few lives hang on the seconds which a doctor may be able to save by unsafe operation of his automobile. The medical profession's greatest contribution to the saving of lives does not consist in accident prevention. It consists in the prompt and effective treatment of accident victims. For this contribution hospitals and the medical profession locally have organized so that accident victims will receive immediate medical attention in all but the most exceptional instances.

1. Truman, S. R.: Correspondence, this issue, page 1456.
2. Report of Council on Foods and Nutrition, Mineral Oil (Liquid Petrolatum) in Foods, J. A. M. A. **123**: 967 (Dec. 11) 1943.
3. Mineral Oil Salad Dressings Adulterated Under Any Form of Labeling, Food, Drug and Cosmetic Act Trade Correspondence, April 4, 1946.

1. Public Relations Office, the National Mental Health Foundation, Box 7574, Philadelphia 1.

1. National Committee for Traffic Safety **2**, July 1946.

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MEDICAL SERVICE CORPS

In THE JOURNAL July 27, 1946 was published a statement relative to the plans of Major Gen. Norman T. Kirk for the development of a Medical Service Corps. Unfortunately a quotation was made from a statement said to have been made by General Kirk to the Senate Military Committee which intimated that the membership in this corps would include persons "not truly professional." General Kirk writes:

The article Medical Service Corps (THE JOURNAL, July 27, p. 1063) brought to our attention the unfortunate wording in the last paragraph, which could be interpreted as failing to recognize the professional standing and qualifications of the following highly trained army specialists: (*a*) bacteriologists, (*b*) biochemists, (*c*) physiologic chemists, (*d*) entomologists, (*e*) parasitologists, (*f*) serologists, (*g*) sanitary engineers. This was not intended. The proposed Medical Service Corps was designed to include Medical Department professional specialists who are not members of the medical or dental profession and who are therefore not eligible for either of these corps.

MAYO CLINIC AND FACULTY OF MAYO FOUNDATION CITED

In token of its appreciation for the patriotic service rendered by the staff of the Mayo Clinic and the faculty of the Mayo Foundation, University of Minnesota Graduate School, the War Department recently sent to the director of the foundation a certificate dated July 1, 1946 and signed by Secretary of War Robert P. Patterson, Lieut. Gen. LeRoy Lutes, commanding general of the Army Service Forces, and Major Gen. Norman T. Kirk, Surgeon General of the Army. The certificate stated in part that ". . . gave unselfishly of . . . time and energies . . . and . . . performed a service of inestimable value to the nation." Also that "During the period Jan. 5, 1942 to June 28, 1945 approximately one thousand officers of the Medical Department, Army of the United States, received instruction at the Mayo Foundation in well planned courses in the subjects of anesthesiology, aviation medicine, cardiovascular-renal disease, electroencephalography, gastroenterology, general surgery and surgical specialties, maxillofacial plastic surgery, neurology, neurosurgery, physical therapy, radiology, roentgenology, surgery of the extremities and thoracic surgery."

TWO MORE SURGEONS APPOINTED CONSULTANTS TO SECRETARY OF WAR

In addition to fifty-six prominent civilian surgeons recently named as consultants to the Secretary of War through the Surgeon General, two more were recently named in a War Department announcement. They were Dr. Brian Blades, professor of surgery, George Washington University, Washington, D. C., and former chief of thoracic surgery, Walter Reed General Hospital, Washington, and Dr. Frank B. Berry, Columbia Medical Center, New York. Dr. Berry is clinical professor of surgery, Columbia University, and director of surgery, First Surgical Division, Bellevue Hospital, New York.

VETERANS ADMINISTRATION

EXPAND PROGRAM FOR VETERANS SUFFERING EMOTIONAL ILLNESSES

The Veterans Administration recently announced that an expanded program for the thousands of World War II veterans suffering emotional illnesses of service connected origin was authorized.

Under a new directive, deputy administrators of the thirteen branch areas have been given permission to establish mental hygiene clinics in any of the agency's seventy regional offices when such additional facilities are rated as "necessary" and the professional staff can be employed within existing personnel ceilings.

Pointing to the great need for adequate treatment of the mentally sick, the Veterans Administration directive set the following official policy:

"The need for treatment of the large number of veterans discharged from service with mental and nervous illnesses is evident. Experience in civilian practice before the war and in the armed services during the war indicates that the majority of these cases can be treated effectively in a clinic without hospitalization.

"The mental hygiene clinics will render this treatment on an outpatient status and will be responsible for conducting the entire outpatient neuropsychiatric treatment program in the selected regional offices.

"This program will serve to alleviate a minor neuropsychiatric illness, prevent the development of a more serious illness and consequently reduce the number of veterans requiring hospitalization."

In the mental hygiene program, emphasis will be placed on group therapy, which is the simultaneous treatment of a number of veterans suffering from similar mental or emotional disturbances. This technic would provide for maximum utilization of the limited number of psychiatrists on duty. When facilities and time are available and when the patient's condition requires it, individual treatment will be provided.

The neuropsychiatrist, clinical psychologist and social worker will cooperate as a team in treating the patient so that all aspects of his sickness may be studied by experts. As a general working plan, the team is composed of one psychiatrist, one clinical psychologist and two social workers for each group of 50 patients.

The Veterans Administration provides that doctors employed as neuropsychiatrists shall be veterans, if possible; either specialists certified by the American Board of Psychiatry and Neurology or physicians ready to take such examinations, and that they shall have had experience in treating psychoneuroses and allied conditions.

Deputy administrators were told that, if an adequate staff for a new mental hygiene clinic could not be obtained under existing personnel ceilings, they must consult the central office in Washington, D. C., about the possibilities of raising such quotas to permit the new project. Such information would include a justification as to why the new clinic is considered "necessary."

CERTAIN SPECIFIC DISEASES TREATED WITH STREPTOMYCIN

Dr. Paul R. Hawley, chief medical director of the Veterans Administration, recently stated that streptomycin has proved spectacularly effective in treating certain specific diseases in Veterans Administration hospitals. The most effective uses to date have been for kidney and bladder infections and tularemia. It has also been used with some success in a limited number of cases of abdominal infections (peritonitis) and tuberculous meningitis.

Preliminary reports from Veterans Administration hospitals indicate that approximately 3 out of every 4 patients receiving streptomycin have recovered or shown decided improvement, Dr. Hawley said.

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MEDICAL OFFICERS RELEASED BY THE NAVY

NAVAL RESERVE MEDICAL OFFICERS RECOMMENDED FOR RELEASE FROM ACTIVE DUTY

Alabama

Christian, Kenneth G.....Cullman

Arizona

Gregg, Harold J.....Tuscon
Meadows, Russell Jr.....Bisbee

Arkansas

Gray, Oscar Jr.....Little Rock
Lee, William R.....Hot Springs
Oates, Gordon P.....Little Rock
Schrantz, Freemand S.....Helena

California

Aikin, William P. Jr.....Beverly Hills
Clerou, Romain P.....Bakersfield
Dockham, Charles W.....Los Angeles
Forinash, Richard P.....Beverly Hills
Gordon, Robert G.....San Diego
Gore, Arthur F.....Long Beach
Higgins, John W.....Montebello
Levin, Melvin "H".....Beverly Hills
Mathes, Larry B.....Los Angeles
Morrill, Lewis, Jr.....Los Angeles
Predmore, Howard D. Jr.....Glendale
Reed, Denver C.....Los Angeles
Schoff, Charles E. Jr.....Sacramento
Sibley, Wixom S.....San Bruno
Tancredi, Chester.....San Diego
Taylor, Walter R.....San Diego
Tenney, Luman H.....Long Beach
Thompson, Edgar A.....Pasadena
Thompson, William P.....Los Angeles
Walker, Ralph H.....North Hollywood

Colorado

Boyden, George M.....Colorado Springs
Lehmer, Robert A.....Denver
Robb, William J.....Pueblo
Waggener, Karl J.....Pueblo

Connecticut

Flanagan, Edwin D.....South Norwalk
Samponaro, Nicholas.....Torrington
Sears, Robert A.....New Haven
Spitz, Hilliard.....New London
White, Benjamin V. Jr.....Hartford

Delaware

Ingram, Albert L. Jr.....Wilmington

Florida

House, Curtis R.....Naples
Lanier, Joe E.....Jacksonville
Pettit, Paul H.....Miami
Sompayrac, Lauren M.....St. John's City
Straight, William M.....Miami
Sullivan, Arthur G.....Pensacola

Georgia

Brown, John M.....Dillard
Daughtrey, John E.....Atlanta
Freeman, Percy L.....Thomaston
Hall, John I.....Macon
Harp, Stephens L.....Oglethorpe
Hopkins, Enon C.....Waynesboro
Howard, Charles K.....Atlanta
Marshall, Andrew S.....Perry
Turner, Henry H. II.....Atlanta

Idaho

Jensen, Robert E.....Moscow

Illinois

Balmer, Frederick B.....Chicago
Barton, Harry L.....Chicago
Bergmann, Harry W.....Wheaton
Christensen, Carl W.....Waukegan
Cosand, Merle E.....Carbondale

Illinois—Continued

Dussman, Thomas R.....La Grange
Ekstrand, Leroy M.....Waukegan
Ewen, Edgar F.....Mt. Olive
Figueroa, Liborio.....Chicago
Froelich, Bernard J.....Evanston
Green, George G.....Leland
Henry, Jimmy F.....East St. Louis
Hoffman, Jacob O.....Chester
Kaplan, Joshua S.....Chicago
Mitchell, Eugene P.....Murphysboro
Ranker, Daniel T.....Chicago
Robbin, Nathan L.....Chicago
Rosendale, Frank.....Chicago
Roth, Leslie W.....Belleville
Sloczewski, Joseph A.....Chicago
Thompson, Jack W.....Evanston
Veatch, Charles A.....Alton
West, Chester A.....Evanston
White, Robert B.....Naperville
Young, Thomas R. Jr.....Chicago

Indiana

Bloom, George R.....Elkhart
Burkholder, Maurice M.....Berne
Carpenter, Thomas D.....Columbus
Emenhiser, John L.....Woodburn
Forsee, Norman E.....Jeffersonville
Humphrey, James C.....Hammond
Logan, James Z.....Richmond
Shick, Richard M.....LaPorte
Van Den Bosch, Wallace R..Mooresville

Iowa

Bassett, George H.....Sac City
Radcliffe, Christian E.....Iowa City

Kansas

Beaty, Evert C.....Parsons
Brown, Robert S.....Hoisington
Horton, William D.....Chanute
Lysaught, James N.....Kansas City
Powers, George H.....Lawrence
Price, Frank J.....Topeka
Traylor, David L.....Lebo
Van Pelt, Clifford A. Jr....Junction City

Kentucky

Burgess, Francis E.....Louisa
Murphy, Douglas R.....Louisville
Radmacher, Burrell F. Jr.....Louisville
Royalty, Daley M.....Harrodsburg
Warder, Francis M.....Glasgow
Weinfurtner, Bernard J.....Louisville

Maryland

Carey, Richard A.....Baltimore
Crigler, John F. Jr.....Baltimore
Johnson, Murray L.....Baltimore
Moses, Robert A.....Baltimore
Rudo, Nathan.....Baltimore

Michigan

Gustafson, Everette.....Ann Arbor
Hand, Fordus V.....Detroit
Levin, Manuel.....Ann Arbor
McNair, John N.....Albion
Markey, Francis L.....Saginaw
Rekshan, William R.....Detroit
Rice, Robert E.....Grand Rapids
Tregenza, William K.....Detroit
Truba, Paul K.....Detroit
Van Raaphorst, Leonard F.....Dearborn
Weber, George R.....Detroit

Mississippi

Bynum, Gustavus A.....Hattiesburg
Fox, Brent.....Bogue Chitto
Jurney, Louis M.....Ackerman

Missouri

Beuerman, Virgil A.....Kansas City
Dugan, Lawrence J.....St. Louis
Egbert, Galen S.....Kansas City
Flanders, Herschel A.....Kansas City
Hoke, Wilbur J.....St. Louis
Kister, George E.....St. Charles
Rhodes, Euhlan L.....Warsaw

Montana

Kearns, Edmund J.....Bozeman

Nebraska

Bush, Stuart K.....Sidney
Elliott, Thomas S.....Ord
Hasty, Robert C.....Omaha
Koutsky, Joseph J.....Lincoln
Smith, Richard D.....Lincoln
Uridil, Creighton F.....Hastings
Zikmund, Elno T.....Omaha

New Jersey

Barbella, Joseph D.....Newark
Brandman, Leonard J.....East Orange
Brower, Francis M. III.....Woodbury
Goodman, Rowland D. II.....Montclair
Goodspeed, William K.....Plainfield
Hely, Charles J. Jr.....Westfield
Kramer, Bernard M.....Perth Amboy
MacMillan, C. W.....Upper Montclair
Moretti, John J.....E. Orange
O'Neill, Charles L. Jr.....Newark
Platzer, Richard F.....Claverack
Shoemaker, Robert E....Haddon Heights
Starks, Hamlin A.....Orangeburg
Sudimack, George A.....Bayonne
Zinkin, Solomon B.....Lakewood

Oklahoma

Arrendell, Eugene H.....Ponca City
Hardy, Samuel I.....Oklahoma City
Hott, Sabert A. Jr.....Oklahoma City
Payte, James I.....Oklahoma City
Shackelford, Paul O.....Haskell

Oregon

Courtney, Donald I.....The Dalles
Crothers, Morris K.....Salem
Lyman, George P.....Oswego
Miller, Horace G.....Salem
Nickelsen, Theodore R.....Portland
Whoolery, Lawrence A.....Portland

Rhode Island

Smith, Orland F.....Pawtucket
Vose, Francis P.....Manville

South Carolina

McNair, John D.....Latta
Tucker, Robert P.....Charleston

South Dakota

Larson, Claude S.....Sioux Falls
Munson, Hugh B.....Whitewood
Noble, Paul R.....Mitchell

Tennessee

Nelson, Henry S.....Nashville
Whitaker, Horace T. Jr.....Fayettville
Wilson, Wendell W.....Lafayette

Texas

Coffman, Graham M.....Galveston
Kauffmann, Adolph F. III.....Kenedy
Neill, John L.....Tyler
Pangman, William J.....El Paso
Rogers, Stanley F.....Houston
Stell, Cecil I.....Dallas

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ORGANIZATION SECTION

Washington Letter

(From a Special Correspondent)

Aug. 19, 1946.

President Approves Hospital Bill, With Reservations

President Truman has signed a bill providing for a program of hospital construction with federal aid, but he has criticized four provisions as "objectionable." The measure seeks to furnish adequate hospital care for the nation by authorizing $375,000,000 in federal aid to states in a five year hospital building plan. The government is to pay 40 per cent of construction costs for public and nonprofit institutions built under state programs approved by the Surgeon General. Mr. Truman objected to establishment of a council composed of persons who are not full time government officials to advise the Surgeon General and have veto power over certain of his actions. The President objected to a state agency being permitted to appeal to federal courts when dissatisfied with a federal administrator's denial of a hospital project. He approved the bill because of the urgent need to start a program. Dr. Thomas Parran of the U. S. Public Health Service, who will administer the act under supervision of the Federal Security Agency, hailed the new measure, stating that for the first time a national policy is set "which makes it clear that hospitals in the future must be planned, located and operated in relation to the overall health needs of the people."

Confusion Found Regarding Veteran Rights of Resident Physicians in Hospitals

Considerable confusion both in the minds of war veterans and in hospitals on the rights of resident physicians under the education provisions of the G. I. Bill of Rights is disclosed by a newspaper survey. Several thousand doctors throughout the country are involved. One point of misunderstanding is whether or not the Veterans Administration is to pay $500 a year to defray the expenses of staff residents, as public law 346 seems to say. In some hospitals, superintendents have told resident veterans that they are already receiving all equipment and supplies they need. Several hospitals have been unaware that they were entitled to payment of tuition by the Veterans Administration. Washington, D. C., hospitals are said to have varying policies with regard to resident physicians.

President Approves Bill for Governmental Health Centers

President Truman has approved the bill authorizing federal agencies and departments to establish health clinics and programs for their employes, with service limited to treatment for on the job illness and emergency dental care. The government has thus entered the field of preventive medicine. Programs will be coordinated by the U. S. Public Health Service and the Budget Bureau. Agencies can seek four categories of activity: (1) systematic preemployment and other physical examinations, (2) emergency treatment for on the job illness and injuries, (3) reference to private physicians for the treatment of ailments discovered by examination and (4) health education by propaganda and other measures, such as vaccination.

Cows to Chew Radioactive Cuds From Manhattan Project

The Army's Manhattan Project has made available to the University of Maryland agriculture experiment station radioactive phosphorus to be mixed in the cows' diet to improve dairy breeds and increase milk production. The phosphorus tracers are expected to make it possible to learn more of how a cow produces milk and butter fat. Dr. Mark Graubard of the U. S. Department of Agriculture says that better cattle strains may be produced by mating animals which assimilate milk producing factors best.

Army Launches Lip Reading Program for Deaf Servicemen

The first of its kind in the country for army personnel, an oral rehabilitation center to teach lip reading and the use of hearing aids will be opened soon at the Forest Glen branch of Walter Reed Hospital, with Major H. C. Barnaby tentatively acting as director. The unit will be open to all men on active duty who have suffered disabilities affecting their hearing. Three centers were operated during the war, but two have closed and the third is to stop operation soon. Regulations may be changed to permit veterans to take the course.

Planning Started on Hospital Center for District of Columbia

Although Congress must still appropriate the necessary money, planning is to start at once on the multimillion dollar hospital center authorized for the District of Columbia. The bill, signed by President Truman, provides for a 15 to 20 million dollar outlay to bring Washington's hospital facilities up to model standards.

Maryland Seeks New Dean of Medical School

Resignation of Gen. Robert U. Patterson, dean of the University of Maryland School of Medicine and College of Physicians and Surgeons and superintendent of the university hospital, who had accepted both positions in 1942 for the duration of the war, has left both positions vacant.

Coming Medical Meetings

Annual Congress on Industrial Health, Boston, Sept. 30-Oct. 3. Dr. Carl M. Peterson, 535 N. Dearborn St., Chicago 10, Secretary.

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 13-18. Dr. W. L. Benedict, 102 Second Ave., Rochester, Minn., Secretary.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Hot Springs, Va., Sept. 5-7. Dr. James R. Bloss, 418 Eleventh St., Huntington 1, W. Va., Secretary.

American Association on Mental Deficiency, Montreal, Canada, Oct. 2-4. Dr. Neil A. Dayton, Mansfield Depot, Connecticut, Secretary.

American Congress of Physical Medicine, New York, Sept. 4-7. Dr. Richard Kovacs, 2 East 88th St., New York 28, Secretary.

American Diabetes Association, Toronto, Canada, Sept. 16-18. Dr. Cecil Striker, 630 Vine St., Cincinnati 2, Secretary.

American Hospital Association, Philadelphia, Sept. 30-Oct. 3. Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secretary.

American Roentgen Ray Society, Cincinnati, Sept. 17-20. Dr. H. Dabney Kerr, University Hospital, Iowa City, Iowa, Secretary.

Association of Military Surgeons of the United States, Detroit, Oct. 9-11. Col. James M. Phalen, Army Medical Museum, Washington 25, D. C., Secretary.

Colorado State Medical Society, Estes Park, Sept. 11-14. Mr. Harvey T. Sethman, 1612 Tremont Place, Denver 2, Executive Secretary.

District of Columbia, Medical Society of the, Washington, Sept. 30-Oct. 2. Mr. Theodore Wiprud, 1718 M Street N. W., Washington 6, Secretary.

Inter-State Postgraduate Medical Association of North America, Cleveland, Oct. 15-18. Dr. Tom B. Throckmorton, 406 Sixth Ave., Des Moines, Iowa, Secretary.

Kentucky State Medical Association, Paducah, Sept. 30-Oct. 3. Dr. P. E. Blackerby, 620 S. Third St., Louisville, Secretary.

Michigan State Medical Society, Detroit, Sept. 25-27. Dr. L. Fernald Foster, 2020 Olds Tower, Lansing 8, Secretary.

Mississippi Valley Medical Society, St. Louis, Sept. 25-27. Dr. Harold Swanberg, 510 Maine St., Quincy, Ill., Secretary.

Nevada State Medical Association, Las Vegas, Oct. 4-5. Dr. Moreton J. Thorpe, 17 N. Virginia St., Reno, Secretary.

North Pacific Pediatric Society, Vancouver, B. C., Oct. 19. Dr. A. B. Johnson, Cobb Bldg., Seattle 1, Secretary.

Oregon State Medical Society, Gearhart, Sept. 26-28. Dr. Thomas S. Saunders, 1020 S.W. Taylor St., Portland 5, Secretary.

Pennsylvania, Medical Society of the State of, Philadelphia, Oct. 7-10. Dr. Walter F. Donaldson, 300 Penn Ave., Pittsburgh 22, Secretary.

Southern Psychiatric Association, Richmond, Va., Oct. 7-8. Dr. Newdigate M. Owensby, 384 Peachtree St. N.E., Atlanta, Ga., Secretary.

Utah State Medical Association, Salt Lake City, Aug. 29-31. Dr. D. G. Edmunds, 610 McIntyre Bldg., Salt Lake City, Secretary.

Vermont State Medical Society, Burlington, Oct. 2-4. Dr. Benjamin F. Cook, 128 Merchants Row, Rutland, Secretary.

Virginia, Medical Society of, Virginia Beach, Oct. 14-16. Miss Agnes V. Edwards, 1200 East Clay St., Richmond 19, Secretary.

Wisconsin, State Medical Society of, Milwaukee, Oct. 7-9. Mr. Charles H. Crownhart, 110 E. Main St., Madison 3, Secretary.

Official Notes

SEVENTH ANNUAL CONGRESS ON INDUSTRIAL HEALTH

Preliminary Program

To be held at Hotel Copley Plaza, Boston, September 30-October 2

MONDAY, SEPTEMBER 30—MORNING SESSION

CONFERENCE ON LEAD POISONING

Facts and Fallacies of Lead Exposure
FELIX WORMSER, Secretary, Lead Industries Association, New York
Public Exposure to Lead
PHILIP DRINKER, S.B., Ch.E., Harvard School of Public Health, Boston
Occupational Exposure to Lead
MAY R. MAYERS, M.D., Chief, Medical Unit, Division of Industrial Hygiene and Safety Standards, State of New York Department of Labor, New York
Absorption and Fate of Lead in the Body
JOSEPH C. AUB, M.D., Massachusetts General Hospital, Boston

MONDAY, SEPTEMBER 30—AFTERNOON SESSION

Clinical Diagnosis
DONALD HUNTER, M.D., Department of Research in Industrial Medicine, London Hospital, London
WILLARD MACHLE, M.D., New York
Radiology in Diagnosis of Lead Poisoning
JOHN CAFFEY, M.D., The Presbyterian Hospital, New York
Analytic Methods in Diagnosis
LAWRENCE T. FAIRHALL, Senior Scientist (R), Industrial Hygiene Division, U. S. Public Health Service, Washington, D. C.
Summary
ROBERT A. KEHOE, M.D., Kettering Laboratory of Applied Physiology, University of Cincinnati College of Medicine, Cincinnati

MONDAY, SEPTEMBER 30—AFTERNOON SESSION

SURGICAL CONFERENCE—THE FOOT IN INDUSTRY

(Speakers to be Announced)

The Frequency and Severity of Foot Injuries
Functional Anatomy, with Special Reference to Foot Examination
Common Injuries to the Foot
(*a*) Corns, Bunions, Calluses
(*b*) Puncture Wounds
(*c*) Burns and Frost Bite
(*d*) Injuries to the Phalanges
(*e*) Injuries to Tarsus and Metatarsus
Injuries to the Ankle
Diseases of the Extremity That Influence Healing
Shoeing for Comfort and Protection

MONDAY—EVENING SESSION, 7 O'CLOCK

STATE SOCIETY DINNER AND MEETING

The annual conference of state medical society committees on industrial health.

TUESDAY, OCTOBER 1—MORNING SESSION

GENERAL SESSION

Call to Order
DWIGHT O'HARA, M.D., President, Massachusetts Medical Society
Invocation
Address of Welcome
HON. MAURICE J. TOBIN, Governor of the Commonwealth of Massachusetts
Report of the Council on Industrial Health
STANLEY J. SEEGER, M.D., Chairman
Keynote Address—Human Relations in Industry
(Speaker to be announced)

PANEL DISCUSSION

New Horizons in Industrial Health and Welfare
ADMIRAL JOEL T. BOONE (MC), U.S.N., Coal Mines Administration, U. S. Department of the Interior
ANDREW FLETCHER, President, Industrial Hygiene Foundation
BORIS STERN, Chief, Industrial Relations Branch, Bureau of Labor Statistics, U. S. Department of Labor

TUESDAY, OCTOBER 1—AFTERNOON SESSION

ELECTIVE CONFERENCES

SECTION ON ADMINISTRATIVE METHODS

Fitting the Service to the Plant
WILLIAM SEYMOUR, Vice President, Liberty Mutual Insurance Company, Boston
Conserving the Health of Management
EARL LUTZ, M.D., General Motors Corporation, Detroit
Recent Experiments in Small Plant Medical Service
FENN E. POOLE, M.D., Lockheed Aircraft Corporation, Glendale
L. S. ARLING, M.D., Director, The Northwest Industrial Clinic, Minneapolis
NATHAN MILLMAN, M.D., Director, Office of Industrial Health, New York State Department of Labor, Long Island City

TUESDAY, OCTOBER 1—AFTERNOON SESSION

ELECTIVE CONFERENCES

SECTION ON INDUSTRIAL PHYSIOLOGY

(Arranged jointly with the Committee on Nutrition of Industrial Workers, Food and Nutrition Board, National Research Council.)

SYMPOSIUM ON WORK CAPACITY

Respiratory and Circulatory Capacities in Normal Man
D. B. DILL, Ph.D., Director, Laboratory of Physiological Hygiene, University of Minnesota, Minneapolis
Nutrition and Capacity for Work
ANCEL KEYS, PH.D., Director, Laboratory of Physiological Hygiene, University of Minnesota, Minneapolis
Industrial Pulmonary Diseases and Capacity for Work
GEORGE WRIGHT, M.D., Trudeau Foundation, Saranac Lake
Heart Disease and Work Capacity in Industry
Speaker to be announced

TUESDAY, OCTOBER 1—AFTERNOON SESSION

ELECTIVE CONFERENCES

SECTION ON WORKMEN'S COMPENSATION AND REHABILITATION

The National Workmen's Compensation Conference Committee—Its Plan and Accomplishments
T. A. WILSON, Chairman, Raleigh, N. C.
What About the Handicapped?
HON. AUGUSTINE B. KELLEY, Chairman, Subcommittee on Aid to Physically Handicapped, Committee on Labor, House of Representatives, Congress of the United States, Washington, D. C.
Occupational Capacity Following Traumatic Injury
GEORGE DEAVER, M.D., Medical Director, Institute for the Crippled and Disabled, New York

TUESDAY, OCTOBER 1—EVENING SESSION, 7 O'CLOCK

Pan American Relations—Dinner and Conference

A discussion of industrial health and hygiene in the light of current international health development, with special emphasis on improved inter-American industrial health relations.

WEDNESDAY, OCTOBER 2—MORNING SESSION

SYMPOSIUM ON THERAPEUTIC HIGHLIGHTS

Arranged with the Council on Pharmacy and Chemistry; topics and speakers to be announced.

SYMPOSIUM ON ATOMIC ENERGY IN INDUSTRY AND MEDICINE

Arranged with the Council on Physical Medicine.

Atomic Energy in Industry and the Physical Sciences
SAMUEL K. ALLISON, Director, Institute for Nuclear Studies, University of Chicago, Chicago
Physiologic Effects of Nuclear Energy
SHIELDS WARREN, M.D., Washington, D. C.
Essential Safeguards in Production and Use of Atomic Energy
JOHN E. WIRTH, M.D., Knoxville, Tenn.

WEDNESDAY, OCTOBER 2—AFTERNOON SESSION

SYMPOSIUM ON FITNESS FOR WORK—A PROGRAM FOR INDUSTRY, LABOR AND MEDICINE

Arranged with the Committee on Physical Fitness, A. M. A., and the Bureau of Health Education, A. M. A.

Essential Factors for Health and Fitness
MORRIS FISHBEIN, M.D., Editor of THE JOURNAL, Chicago.
The Need for a Physical Fitness Campaign
COL. RICHARD H. EANES, Medical Director, Selective Service System, Washington, D. C.
Does American Education Produce Physically Fit Workers?
DEAN F. SMILEY, M.D., Bureau of Health Education, American Medical Association, Chicago
The Evaluation of Fitness
RUTH BOYNTON, M.D., Director, Student Health Service, University of Minnesota, Minneapolis
Positive Mental Health
C. C. BURLINGAME, M.D., Psychiatrist in Chief, The Institute of Living, Hartford, Conn.
Summary and Plan of Action

TELEVISION PROGRAMS

In continuation of its pioneer work in the field of television, the Bureau of Health Education announces the following subjects and dates in the experimental telecasts from station WKBK Chicago:

August 29: Massage. Miss Gertrude Beard.
September 12: Drugs in the Home. Dr. Austin E. Smith.
September 26: Penicillin. Dr. Walton Van Winkle Jr.

As was announced earlier, the programs are being presented on a sustaining basis; that is, the station derives no revenue. Scripts, dramatizations and demonstrations are prepared with the cooperation of WKBK personnel, the Bureau of Health Education and each demonstrator. The time of the telecast varies from 7:30 p. m. to 8:15 p. m.

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WORLD HEALTH ORGANIZATION CHARTER

The World Health Organization has been set up as a means of implementing one of the objectives of the United Nations. The constitution will come into force when signed by twenty-six members.

The states parties to this constitution declare, in conformity with the Charter of the United Nations, that the following principles are basic to the happiness, harmonious relations and security of all peoples:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief or economic or social condition.

The health of all peoples is fundamental to the attainment of peace and security and is dependent on the fullest cooperation of individuals and states.

The achievement of any state in the promotion and protection of health is of value to all.

Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger.

Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development.

The extension to all peoples of the benefits of medical, psychologic and related knowledge is essential to the fullest attainment of health.

Informed opinion and active cooperation on the part of the public are of the utmost importance in the improvement of the health of the people.

Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.

Accepting these principles, and for the purpose of cooperation among themselves and with others to promote and protect the health of all peoples, the contracting parties agree to the present constitution and hereby establish the World Health Organization as a specialized agency within the terms of article 57 of the charter of the United Nations.

CHAPTER I. OBJECTIVE

ARTICLE 1.—The objective of the World Health Organization (hereinafter called the Organization) shall be the attainment by all peoples of the highest possible level of health.

CHAPTER II. FUNCTIONS

ARTICLE 2.—In order to achieve its objective, the functions of the Organization shall be:

(*a*) To act as the directing and coordinating authority on international health work.

(*b*) To establish and maintain effective collaboration with the United Nations, specialized agencies, governmental health administrations, professional groups and such other organizations as may be deemed appropriate.

(*c*) To assist governments, on request, in strengthening health services.

(*d*) To furnish appropriate technical assistance and, in emergencies, necessary aid on the request or acceptance of governments.

(*e*) To provide or assist in providing, on the request of the United Nations, health services and facilities to special groups, such as the peoples of trust territories.

(*f*) To establish and maintain such administrative and technical services as may be required, including epidemiologic and statistical services.

(*g*) To stimulate and advance work to eradicate epidemic, endemic and other diseases.

(*h*) To promote, in cooperation with other specialized agencies where necessary, the prevention of accidental injuries.

(*i*) To promote, in cooperation with other specialized agencies where necessary, the improvement of nutrition, housing, sanitation, recreation, economic or working conditions and other aspects of environmental hygiene.

(*j*) To promote cooperation among scientific and professional groups which contribute to the advancement of health.

(*k*) To propose conventions, agreements and regulations and make recommendations with respect to international health matters and to perform such duties as may be assigned thereby to the Organization and are consistent with its objective.

(*l*) To promote maternal and child health and welfare and to foster the ability to live harmoniously in a changing total environment.

(*m*) To foster activities in the field of mental health, especially those affecting the harmony of human relations.

(*n*) To promote and conduct research in the field of health.

(*o*) To promote improved standards of teaching and training in the health, medical and related professions.

(*p*) To study and report on, in cooperation with other specialized agencies where necessary, administrative and social technics affecting public health and medical care from preventive and curative points of view, including hospital services and social security.

(*q*) To provide information, counsel and assistance in the field of health.

(*r*) To assist in developing an informed public opinion among all peoples on matters of health.

(*s*) To establish and revise as necessary international nomenclatures of diseases, of causes of death and of public health practices.

(*t*) To standardize diagnostic procedures as necessary.

(*u*) To develop, establish and promote international standards with respect to food, biologic, pharmaceutical and similar products.

(*v*) Generally to take all necessary action to attain the objective of the Organization.

CHAPTER III. MEMBERSHIP AND ASSOCIATE MEMBERSHIP

ARTICLE 3.—Membership in the Organization shall be open to all states.

ARTICLE 4.—Members of the United Nations may become members of the Organization by signing or otherwise accepting this constitution in accordance with the provisions of chapter XIX and in accordance with their constitutional processes.

ARTICLE 5.—The states whose governments have been invited to send observers to the International Health Conference held in New York in 1946 may become members by signing or otherwise accepting this constitution in accordance with the provisions of chapter XIX and in accordance with their constitutional processes, provided such signature or acceptance shall be completed before the first session of the Health Assembly.

ARTICLE 6.—Subject to the conditions of any agreement between the United Nations and the Organization, approved pursuant to chapter XVI, states which do not become members in accordance with articles 4 and 5 may apply to become members and shall be admitted as members when their application has been approved by a simple majority vote of the Health Assembly.

ARTICLE 7.—If a member fails to meet its financial obligations to the Organization or in other exceptional circumstances the Health Assembly may, on such conditions as it thinks proper, suspend the voting privileges and services to which a member is entitled. The Health Assembly shall have the authority to restore such voting privileges and services.

ARTICLE 8.—Territories or groups of territories which are not responsible for the conduct of their international relations may be admitted as Associate Members by the Health Assembly on application made on behalf of such territory or group of territories by the member or other authority having responsibility for their international relations. Representatives of associate members to the Health Assembly should be qualified by their technical competence in the field of health and should be chosen from the native population. The nature and extent of the rights and obligations of associate members shall be determined by the Health Assembly.

CHAPTER IV. ORGANS

ARTICLE 9.—The work of the Organization shall be carried out by (*a*) the World Health Assembly (hereinafter called the Health Assembly), (*b*) the Executive Board (herein called the Board), (*c*) the Secretariat.

CHAPTER V. The World Health Assembly

Article 10.—The Health Assembly shall be composed of delegates representing members.

Article 11.—Each member shall be represented by not more than three delegates, one of whom shall be designated by the member as chief delegate. These delegates should be chosen from among persons most qualified by their technical competence in the field of health, preferably representing the national health administration of the member.

Article 12.—Alternates and advisers may accompany delegates.

Article 13.—The Health Assembly shall meet in regular annual session and in such special sessions as may be necessary. Special sessions shall be convened at the request of the Board or of a majority of the members.

Article 14.—The Health Assembly, at each annual session, shall select the country or region in which the next annual session shall be held, the Board subsequently fixing the place. The Board shall determine the place where a special session shall be held.

Article 15.—The Board, after consultation with the Secretary General of the United Nations, shall determine the date of each annual and special session.

Article 16.—The Health Assembly shall elect its president and other officers at the beginning of each annual session. They shall hold office until their successors are elected.

Article 17.—The Health Assembly shall adopt its own rules of procedure.

Article 18.—The functions of the Health Assembly shall be:

(*a*) To determine the policies of the Organization.

(*b*) To name the members entitled to designate a person to serve on the Board.

(*c*) To appoint the Director General.

(*d*) To review and approve reports and activities of the Board and of the Director General and to instruct the Board in regard to matters on which action, study, investigation or report may be considered desirable.

(*e*) To establish such committees as may be considered necessary for the work of the Organization.

(*f*) To supervise the financial policies of the Organization and to review and approve the budget.

(*g*) To instruct the Board and the Director General to bring to the attention of members and of international organizations, governmental or nongovernmental, any matter with regard to health which the Health Assembly may consider appropriate.

(*h*) To invite any organization, international or national, governmental or nongovernmental, which has responsibilities related to those of the Organization, to appoint representatives to participate, without right of vote, in its meetings or in those of the committees and conferences convened under its authority, on conditions prescribed by the Health Assembly; but, in the case of national organizations, invitations shall be issued only with the consent of the government concerned.

(*i*) To consider recommendations bearing on health made by the General Assembly, the Economic and Social Council, the Security Council or Trusteeship Council of the United Nations, and to report to them on the steps taken by the Organization to give effect to such recommendations.

(*j*) To report to the Economic and Social Council in accordance with any agreement between the Organization and the United Nations.

(*k*) To promote and conduct research in the field of health by the personnel of the Organization, by the establishment of its own institutions or by cooperation with official or nonofficial institutions of any member with the consent of its government.

(*l*) To establish such other institutions as it may consider desirable.

(*m*) To take any other appropriate action to further the objective of the Organization.

Article 19.—The Health Assembly shall have authority to adopt conventions or agreements with respect to any matter within the competence of the Organization. A two-thirds vote of the Health Assembly shall be required for the adoption of such conventions or agreements, which shall come into force for each member when accepted by it in accordance with its constitutional processes.

Article 20.—Each member undertakes that it will, within eighteen months after the adoption by the Health Assembly of a convention or agreement, take action relative to the acceptance of such convention or agreement. Each member shall notify the Director General of the action taken and if it does not accept such convention or agreement within the time limit it will furnish a statement of the reasons for nonacceptance. In case of acceptance, each member agrees to make an annual report to the Director General in accordance with chapter XIV.

Article 21.—The Health Assembly shall have authority to adopt regulations concerning:

(*a*) Sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease.

(*b*) Nomenclatures with respect to diseases, causes of death and public health practices.

(*c*) Standards with respect to diagnostic procedures for international use.

(*d*) Standards with respect to the safety, purity and potency of biologic, pharmaceutical and similar products moving in international commerce.

(*e*) Advertising and labeling of biologic, pharmaceutical and similar products moving in international commerce.

Article 22.—Regulations adopted pursuant to article 21 shall come into force for all members after due notice has been given of their adoption by the Health Assembly except for such members as may notify the Director General of rejection or reservations within the period stated in the notice.

Article 23.—The Health Assembly shall have authority to make recommendations to members with respect to any matter within the competence of the Organization.

CHAPTER VI. The Executive Board

Article 24.—The Board shall consist of eighteen persons designated by as many members. The Health Assembly, taking into account an equitable geographic distribution, shall elect the members entitled to designate a person to serve on the Board. Each of these members should appoint to the Board a person technically qualified in the field of health, who may be accompanied by alternates and advisers.

Article 25.—These members shall be elected for three years and may be reelected, provided that of the members elected at the first session of the Health Assembly the terms of six members shall be for one year and the terms of six members shall be for two years, as determined by lot.

Article 26.—The Board shall meet at least twice a year and shall determine the place of each meeting.

Article 27.—The Board shall elect its Chairman from among its members and shall adopt its own rules of procedure.

Article 28.—The functions of the Board shall be:

(*a*) To give effect to the decisions and policies of the Health Assembly.

(*b*) To act as the executive organ of the Health Assembly.

(*c*) To perform any other functions entrusted to it by the Health Assembly.

(*d*) To advise the Health Assembly on questions referred to it by that body and on matters assigned to the Organization by conventions, agreements and regulations.

(*e*) To submit advice or proposals to the Health Assembly on its own initiative.

(*f*) To prepare the agenda of meetings of the Health Assembly.

(*g*) To submit to the Health Assembly for consideration and approval a general program of work covering a specific period.

(*h*) To study all questions within its competence.

(*i*) To take emergency measures within the functions and financial resources of the Organization to deal with events requiring immediate action. In particular it may authorize the Director General to take the necessary steps to combat epidemics, to participate in the organization of health relief to victims of a calamity and to undertake studies and research the urgency of which has been drawn to the attention of the Board by any member or by the Director General.

Article 29.—The Board shall exercise on behalf of the whole Health Assembly the powers delegated to it by that body.

CHAPTER VII. The Secretariat

Article 30.—The Secretariat shall comprise the Director General and such technical and administrative staff as the Organization may require.

Article 31.—The Director General shall be appointed by the Health Assembly on the nomination of the Board on such terms as the Health Assembly may determine. The Director General, subject to the authority of the Board, shall be the chief technical and administrative officer of the Organization.

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ARTICLE 32.—The Director General shall be ex officio Secretary of the Health Assembly, of the Board, of all commissions and committees of the Organization and of conferences convened by it. He may delegate these functions.

ARTICLE 33.—The Director General or his representative may establish a procedure by agreement with members, permitting him, for the purpose of discharging his duties, to have direct access to their various departments, especially to their health administrations and to national health organizations, governmental or nongovernmental. He may also establish direct relations with international organizations whose activities come within the competence of the Organization. He shall keep regional offices informed on all matters involving their respective areas.

ARTICLE 34.—The Director General shall prepare and submit annually to the Board the financial statements and budget estimates of the Organization.

ARTICLE 35.—The Director General shall appoint the staff of the Secretariat in accordance with staff regulations established by the Health Assembly. The paramount consideration in the employment of the staff shall be to assure that the efficiency, integrity and internationally representative character of the Secretariat shall be maintained at the highest level. Due regard shall be paid also to the importance of recruiting the staff on as wide a geographic basis as possible.

ARTICLE 36.—The conditions of service of the staff of the Organization shall conform as far as possible with those of other United Nations organizations.

ARTICLE 37.—In the performance of their duties the Director General and the staff shall not seek or receive instructions from any government or from any authority external to the Organization. They shall refrain from any action which might reflect on their position as international officers. Each member of the Organization on its part undertakes to respect the exclusively international character of the Director General and the staff and not to seek to influence them.

CHAPTER VIII. COMMITTEES

ARTICLE 38.—The Board shall establish such committees as the Health Assembly may direct and, on its own initiative or on the proposal of the Director General, may establish any other committees considered desirable to serve any purpose within the competence of the Organization.

ARTICLE 39.—The Board, from time to time and in any event annually, shall review the necessity for continuing each committee.

ARTICLE 40.—The Board may provide for the creation of or the participation by the Organization in joint or mixed committees with other organizations and for the representation of the Organization in committees established by such other organizations.

CHAPTER IX. CONFERENCES

ARTICLE 41.—The Health Assembly or the Board may convene local, general, technical or other special conferences to consider any matter within the competence of the Organization and may provide for the representation at such conferences of international organizations and, with the consent of the government concerned, of national organizations, governmental or nongovernmental. The manner of such representation shall be determined by the Health Assembly or the Board.

ARTICLE 42.—The Board may provide for representation of the Organization at conferences in which the Board considers that the Organization has an interest.

CHAPTER X. HEADQUARTERS

ARTICLE 43.—The location of the headquarters of the Organization shall be determined by the Health Assembly after consultation with the United Nations.

CHAPTER XI. REGIONAL ARRANGEMENTS

ARTICLE 44.—(*a*) The Health Assembly shall from time to time define the geographic areas in which it is desirable to establish a regional organization.

(*b*) The Health Assembly may, with the consent of a majority of the members situated within each area so defined, establish a regional organization to meet the special needs of such area. There shall not be more than one regional organization in each area.

ARTICLE 45.—Each regional organization shall be an integral part of the Organization in accordance with this constitution.

ARTICLE 46.—Each regional organization shall consist of a Regional Committee and a Regional Office.

ARTICLE 47.—Regional Committees shall be composed of representatives of the member states and associate members in the region concerned. Territories or groups of territories within the region which are not responsible for the conduct of their international relations and which are not associate members shall have the right to be represented and to participate in Regional Committees. The nature and extent of the rights and obligations of these territories or groups of territories in Regional Committees shall be determined by the Health Assembly in consultation with the member or other authority having responsibility for the international relations of these territories and with the member states in the region.

ARTICLE 48.—Regional Committees shall meet as often as necessary and shall determine the place of each meeting.

ARTICLE 49.—Regional Committees shall adopt their own rules of procedure.

ARTICLE 50.—The functions of the Regional Committee shall be:

(*a*) To formulate policies governing matters of an exclusively regional character.

(*b*) To supervise the activities of the Regional Office.

(*c*) To suggest to the Regional Office the calling of technical conferences and such additional work or investigation in health matters as in the opinion of the Regional Committee would promote the objective of the Organization within the region.

(*d*) To cooperate with the respective regional committees of the United Nations and with those of other specialized agencies and with other regional international organizations having interests in common with the Organization.

(*e*) To tender advice, through the Director General, to the Organization on international health matters which have wider than regional significance.

(*f*) To recommend additional regional appropriations by the governments of the respective regions if the proportion of the central budget of the Organization allotted to that region is insufficient for the carrying out of the regional functions.

(*g*) Such other functions as may be delegated to the regional committee by the Health Assembly, the Board or the Director General.

ARTICLE 51.—Subject to the general authority of the Director General of the Organization, the Regional Office shall be the administrative organ of the Regional Committee. It shall, in addition, carry out within the region the decisions of the Health Assembly and of the Board.

ARTICLE 52.—The head of the Regional Office shall be the Regional Director appointed by the Board in agreement with the Regional Committee.

ARTICLE 53.—The staff of the Regional Office shall be appointed in a manner to be determined by agreement between the Director General and the Regional Director.

ARTICLE 54.—The Pan American sanitary organization represented by the Pan American Sanitary Bureau and the Pan American Sanitary Conferences, and all other intergovernmental regional health organizations in existence prior to the date of signature of this constitution, shall in due course be integrated with the Organization. This integration shall be effected as soon as practicable through common action based on mutual consent of the competent authorities expressed through the organizations concerned.

CHAPTER XII. BUDGET AND EXPENSES

ARTICLE 55.—The Director General shall prepare and submit to the Board the annual budget estimates of the Organization. The Board shall consider and submit to the Health Assembly such budget estimates, together with any recommendations the Board may deem advisable.

ARTICLE 56.—Subject to any agreement between the Organization and the United Nations, the Health Assembly shall review and approve the budget estimates and shall apportion the expenses among the members in accordance with a scale to be fixed by the Health Assembly.

ARTICLE 57.—The Health Assembly or the Board acting on behalf of the Health Assembly may accept and administer gifts

and bequests made to the Organization, provided the conditions attached to such gifts or bequests are acceptable to the Health Assembly or the Board and are consistent with the objective and policies of the Organization.

ARTICLE 58.—A special fund to be used at the discretion of the Board shall be established to meet emergencies and unforeseen contingencies.

CHAPTER XIII. VOTING

ARTICLE 59.—Each member shall have one vote in the Health Assembly.

ARTICLE 60.—(*a*) Decisions of the Health Assembly on important questions shall be made by a two-thirds majority of the members present and voting. These questions shall include the adoption of conventions or agreements, the approval of agreements bringing the Organization into relation with the United Nations and intergovernmental organizations and agencies in accordance with articles 69, 70 and 72 and amendments to this constitution.

(*b*) Decisions on other questions, including the determination of additional categories of questions to be decided by a two-thirds majority, shall be made by a majority of the Members present and voting.

(*c*) Voting on analogous matters in the Board and in committees of the Organization shall be made in accordance with paragraphs (*a*) and (*b*) of this article.

CHAPTER XIV. REPORTS SUBMITTED BY STATES

ARTICLE 61.—Each member shall report annually to the Organization on the action taken and progress achieved in improving the health of its people.

ARTICLE 62.—Each member shall report annually on the action taken with respect to recommendations made to it by the Organization and with respect to conventions, agreements and regulations.

ARTICLE 63.—Each member shall communicate promptly to the Organization important laws, regulations, official reports and statistics pertaining to health which have been published in the state concerned.

ARTICLE 64.—Each member shall provide statistical and epidemiologic reports in a manner to be determined by the Health Assembly.

ARTICLE 65.—Each member shall transmit on the request of the Board such additional information pertaining to health as may be practicable.

CHAPTER XV. LEGAL CAPACITY, PRIVILEGES AND IMMUNITIES

ARTICLE 66.—The Organization shall enjoy in the territory of each member such legal capacity as may be necessary for the fulfilment of its objective and for the exercise of its functions.

ARTICLE 67.—(*a*) The Organization shall enjoy in the territory of each member such privileges and immunities as may be necessary for the fulfilment of its objective and for the exercise of its functions.

(*b*) Representatives of members, persons designated to serve on the Board and technical and administrative personnel of the Organization shall similarly enjoy such privileges and immunities as are necessary for the independent exercise of their functions in connection with the Organization.

ARTICLE 68.—Such legal capacity, privileges and immunities shall be defined in a separate agreement to be prepared by the Organization in consultation with the Secretary General of the United Nations and concluded between the members.

CHAPTER XVI. RELATIONS WITH OTHER ORGANIZATIONS

ARTICLE 69.—The Organization shall be brought into relation with the United Nations as one of the specialized agencies referred to in article 57 of the Charter of the United Nations. The agreement or agreements bringing the Organization into relation with the United Nations shall be subject to approval by a two-thirds vote of the Health Assembly.

ARTICLE 70.— The Organization shall establish effective relations and cooperate closely with such other intergovernmental organizations as may be desirable. Any formal agreement entered into with such organizations shall be subject to approval by a two-thirds vote of the Health Assembly.

ARTICLE 71.—The Organization may, on matters within its competence, make suitable arrangements for consultation and cooperation with nongovernmental international organizations and, with consent of the government concerned, with national organizations, governmental or nongovernmental.

ARTICLE 72.—Subject to the approval by a two-thirds vote of the Health Assembly, the Organization may take over from any other international organization or agency whose purpose and activities lie within the field of competence of the Organization such functions, resources and obligations as may be conferred on the Organization by international agreement or by mutually acceptable arrangements entered into between the competent authorities of the respective organization.

CHAPTER XVII. AMENDMENTS

ARTICLE 73.—Texts of proposed amendments to this constitution shall be communicated by the Director General to members at least six months in advance of their consideration by the Health Assembly. Amendments shall come into force for all members when adopted by a two-thirds vote of the Health Assembly and accepted by two thirds of the members in accordance with their respective constitutional processes.

CHAPTER XVIII. INTERPRETATION

ARTICLE 74.—The Chinese, English, French, Russian and Spanish texts of this constitution shall be regarded as equally authentic.

ARTICLE 75.—Any question or dispute concerning the interpretation or application of this constitution which is not settled by negotiation or by the Health Assembly shall be referred to the International Court of Justice in conformity with the statute of the court, unless the parties concerned agree on another mode of settlement.

ARTICLE 76.—On authorization by the General Assembly of the United Nations or on authorization in accordance with any agreement between the Organization and the United Nations, the Organization may request the International Court of Justice for an advisory opinion on any legal question arising within the competence of the Organization.

ARTICLE 77.—The Director General may appear before the court on behalf of the Organization in connection with any proceedings arising out of any such request for an advisory opinion. He shall make arrangements for the presentation of the case before the court, including arrangements for the argument of different views on the question.

CHAPTER XIX. ENTRY INTO FORCE

ARTICLE 78.—Subject to the provisions of chapter III, this constitution shall remain open to all states for signature or acceptance.

ARTICLE 79.—(*a*) States may become parties to this Constitution by (i) signature without reservation as to approval, (ii) signature subject to approval followed by acceptance or (iii) acceptance.

(*b*) Acceptance shall be effected by the deposit of a formal instrument with the Secretary General of the United Nations.

ARTICLE 80.—This Constitution shall come into force when twenty-six members of the United Nations have become parties to it in accordance with the provisions of article 79.

ARTICLE 81.—In accordance with article 102 of the charter of the United Nations, the Secretary General of the United Nations will register this constitution when it has been signed without reservation as to approval on behalf of one state or on deposit of the first instrument of acceptance.

ARTICLE 82.—The Secretary General of the United Nations will inform states parties to this constitution of the date when it has come into force. He will also inform them of the dates when other states have become parties to this constitution.

In faith whereof the undersigned representatives, having been duly authorized for that purpose, sign this constitution.

Done in the city of New York this 22d day of July 1946 in a single copy in the Chinese, English, French, Russian and Spanish languages, each text being equally authentic. The original texts shall be deposited in the archives of the United Nations. The Secretary General of the United Nations will send certified copies to each of the governments represented at the conference.

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THE WAGNER-MURRAY-DINGELL BILL

Hearings on S. 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings.*—ED.)

(Concluded from page 1374)

United States Senate, Committee on Education and Labor.

JUNE 26, 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT: Senators Murray and Donnell.

Statement of Dr. Channing Frothingham, Chairman, Committee for the Nation's Health

DR. FROTHINGHAM: Since this committee is a new organization, perhaps it will be wise to explain its origin and purpose. Shortly after President Truman sent his special health message to Congress last November some 200 persons signed and published an endorsement of his health program. They declared that they wished to see "the recommendations of the message promptly carried out by Congress through legislation." It seemed to several of the signers that an agency to help develop this health program was indicated. An organizing group consequently invited all of those who had endorsed the President's health message and a few others to constitute a national committee for this purpose. The large majority of the endorsers joined. As a result the Committee for the Nation's Health was incorporated on Feb. 23, 1946 as a nonprofit membership association under the laws of the state of New York. This committee was formed for the specific purpose of supporting a national health program such as was put forward by the President last November and of supporting legislation, like Senate 1606, incorporating the principles of such a program.

The committee is supported financially by contributions from individuals. We look forward to building up, during the coming months, a large and widespread membership. Because an important part of the work of the committee is concerned with supporting legislation, we have assumed that contributions to the committee are not tax deductible. The committee includes members of many professions and laymen from business, labor, church and other groups. All of the physician members are members of the American Medical Association.

It may interest you to realize that a practicing physician has consented with enthusiasm to act as chairman of this committee. You may wonder why this is so in view of the claim by spokesmen for the American Medical Association that 90 per cent of the practicing physicians of the country are opposed to this legislation. One primary reason for my doing so is that over years of private practice combined with teaching in a medical school and intimate association with teaching and nonteaching community hospitals I have become impressed with the failure of the present system to deliver good and adequate medical care to many of our people. I believe this fact is now admitted by all, even by opponents of the proposed legislation. Another reason for accepting the chairmanship of this committee is to help get certain important facts straight. For example, I challenge the claim of the spokesmen for the American Medical Association that 90 per cent of the practicing physicians in the United States are against this bill. Probably it is true that a large majority of the members of the governing bodies of the various state medical societies and of the House of Delegates of the American Medical Association are opposed to this legislation. I would like, however, to call the attention of the Senate committee to the method by which delegates to the legislative bodies of the state medical societies and the American Medical Association are selected. I do this to bring out the fact that these delegates are not truly representative of the practicing physicians of the country.

I had the honor of serving terms as vice president of the Massachusetts Medical Society in 1935 and 1936 and two terms as president of the Massachuetts Medical Society in 1937 and 1938. During this period I became conscious that the members of the council of the Massachusetts Medical Society were not elected by what in this country is considered a popular vote and that there was very little opportunity for those not in office in this state society to express their point of view. This state medical society is governed by a council. The members of this council are elected to it by the county medical societies throughout the state. But how are they elected? The presiding officer of each county medical society appoints a nominating committee and this nominating committee puts up a slate. To be sure, others can be nominated but, practically, those who are nominated by the appointed committees are the ones who are voted on and who are elected. The practical result is that those in authority nominate individuals who they believe have their own point of view, and thus opportunity to elect members to the council on a truly democratic basis does not exist in the Massachusetts Medical Society. Minorities rarely get any representation. My impression is that similar methods exist in the other state societies.

At the top of the medical pyramid is the House of Delegates of the American Medical Association. These delegates are hand picked by the hand picked governing bodies of the state societies. Also attention should be called to the fact that there are approximately 50,000 physicians licensed to practice who are not members of the American Medical Association, and those physicians are not organized, so one cannot know their views on this subject. I happen to belong to two groups of practicing physicians all members of the American Medical Association who are enthusiastic about the development of a national health program along the lines of this legislation. One of these groups is the Physicians Forum, which is a national organization with a membership of six or seven hundred, which is steadily increasing. The other is the Committee of Physicians for the Improvement of Medical Care, Inc., which includes in its membership selected physicians from all parts of the country and which is cautiously enlarging this membership. Still another reason why I accepted the chairmanship of the committee is to have an opportunity to make it clear to the Congress that the opinion of a few well informed physicians on this subject of the delivery of medical care may well be of more value than the votes of larger numbers of physicians who are insufficiently informed or misinformed on this subject.

When of late years the American Medical Association discovered that it might have its tax exempt status jeopardized if it undertook propaganda to influence legislation, it formed the National Physicians Committee for the Extension of Medical Service, a nominally separate but officially approved subsidiary. This committee has been flooding the country and especially the practicing physicians' offices with misleading literature. How can practicing physicians whose opinions are formed under these circumstances have correct information or sound judgment on this subject? It would be of interest to know how the practicing physicians of this country would vote in regard to this proposed legislation if properly informed on the subject. There is no doubt that the great majority, even the American Medical Association bureaucrats, realize that some change in the program of delivery of good and adequate medical care is indicated. Let us have a fair, not controlled, discussion of the best method to perfect the needed changes.

(*Dr. Frothingham then presented the usual statements by proponents of compulsory sickness insurance, in the usual manner, and often in the language of statements by Mr. Michael Davis.*—ED.)

Dr. Davis will comment on Senate 2143 from other points of view. Therefore we believe that a compulsory insurance program with funds collected in accordance with every one's ability to pay is essential to open up good medical services to all the citizens.

SENATOR DONNELL: Pardon me, Mr. Chairman, in reference to Dr. Davis, that is Dr. Michael Davis? DR. FROTHINGHAM: That is correct.

SENATOR DONNELL: He is not a physician? DR. FROTHINGHAM: That is correct.

SENATOR DONNELL: The "doctor" title comes from a Ph.D. rather than from being a physician? DR. FROTHINGHAM: I am not sure what kind of a doctor he is, but he is not a physician.

SENATOR DONNELL: Dr. Frothingham, you are appearing this morning for the Committee for the Nation's Health? DR. FROTHINGHAM: Yes, sir.

SENATOR DONNELL: And, as you state in your testimony before the committee, that committee was incorporated on February 23 of this year; is that correct? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: What is the approximate membership of that committee, as it stands, Dr. Frothingham. DR. FROTHINGHAM: Well, I think it is all recorded right here. There are approximately 200 people, I should say. You see, there has been no attempt to enlarge it since it was originally formed.

SENATOR DONNELL: I do not see anything there about the 200 members. I see that 200 persons signed and published an endorsement of the health program of President Truman. DR. FROTHINGHAM: That is right.

SENATOR DONNELL: I did not find anything which stated the number of members of the Committee for the Nation's Health. At any rate, it is about 200, you think? DR. FROTHINGHAM: I think that is right.

SENATOR DONNELL: How widely scattered is the membership of that committee, Doctor? DR. FROTHINGHAM: I think it is pretty well scattered throughout the country.

SENATOR DONNELL: One of these leaflets you have submitted here this morning or that has been handed to the committee shows Michael M. Davis as one of the members of it. That is the Dr. Davis who will probably testify here today? DR. FROTHINGHAM: That is the nonmedical Dr. Davis.

SENATOR DONNELL: And I observe among other members is Mr. Leo J. Linder. That is Mr. Linder of the Lawyers Guild, is it not? DR. FROTHINGHAM: That I do not know.

SENATOR DONNELL: You are not acquainted with him. And do you know how many members this organization has outside of New York City? DR. FROTHINGHAM: No. I think you will find Dr. Davis can give you that data.

SENATOR MURRAY: Doctor, I would like to point out also that you have honorary vice chairmen of your organization, the following well known citizens: Jonathan Daniels, Russell Davenport, Jo Davidson, William Green, Bishop Francis J. McConnell, Philip Murray, Bishop G. Bromley Oxnam, Mrs. F. D. Roosevelt, David Sarnoff, Gerard Swope, and you have here a list of names of other people who are well known citizens of the country scattered over the nation? DR. FROTHINGHAM: I think that is correct.

SENATOR DONNELL: Are you acquainted with Mr. Martin Popper mentioned in your membership? DR. FROTHINGHAM: No.

SENATOR DONNELL: Do you know whether or not he is a member of the P. A. C. and also the executive secretary of the National Lawyers Guild? DR. FROTHINGHAM: I do not even know what the P. A. C. is, sir.

SENATOR DONNELL: The Political Action Committee of the C. I. O.. You are familiar with that organization under that more complete name, are you not? DR. FROTHINGHAM: I am afraid I did not go in for that sort of thing.

SENATOR DONNELL: Did you not know of such a committee as the Political Action Committee of the C. I. O.? DR. FROTHINGHAM: No.

SENATOR DONNELL: Never heard of that? DR. FROTHINGHAM: No.

SENATOR DONNELL: Were you in this country during the campaign of 1944, Doctor? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: Did you not see from one end of the country to the other reference to the Political Action Committee at that time? DR. FROTHINGHAM: No.

SENATOR DONNELL: You did not? DR. FROTHINGHAM: No.

SENATOR DONNELL: Did you read the newspapers at that time? DR. FROTHINGHAM: I do not read that sort of stuff.

SENATOR DONNELL: You do not read references to political action committees? DR. FROTHINGHAM: No, because my politics are biased.

SENATOR DONNELL: Doctor, going down to the matter of your statement, you spoke something about the various propaganda that is issued in the way of misleading statements and pamphlets, editorials and material which the National Physicians Committee sends out. Has the Committee for the Nation's Health, Inc., sent out any literature also? DR. FROTHINGHAM: I think so, yes.

SENATOR DONNELL: I have in my hand a four page leaflet here entitled "Health for the Nation," with a notation on the back that additional material on the national health act is available on request from the Committee for the Nation's Health, Incorporated. Do you know whether or not that was issued by that committee. DR. FROTHINGHAM: That article there, I think you will find, was issued by this committee, is it not?

SENATOR DONNELL: I judge it is, because it says "additional material on that fact is available on request." Did you have anything to do with the preparation of that, Doctor? DR. FROTHINGHAM: The thing you have in your hand? SENATOR DONNELL: Yes. DR. FROTHINGHAM: Yes.

SENATOR DONNELL: I notice you are mentioned there as the chairman, and I notice among other things this conclusion stated here under the heading of "Fact": "Nothing short of passage of the Wagner-Murray-Dingell bill will provide for the nation's health needs." That is your sincere belief, Doctor, I am confident of that, Doctor, from your testimony.' That is what you believe, is it not? DR. FROTHINGHAM: I think it would be quite a step in that direction.

SENATOR DONNELL: I understand you think that, and I respect your opinion on it. Likewise, Doctor, on the other hand, the National Physicians Committee has sent out literature strongly opposed to this plan and commenting on this plan as socialized medicine. That is a correct statement of what they have sent out, is it not? DR. FROTHINGHAM: I have not it in my mind. I put it promptly in the scrap basket when it comes to me.

SENATOR DONNELL: Have you read it? DR. FROTHINGHAM: Not very much of it.

SENATOR DONNELL: You put it in the scrap basket when it arrives? DR. FROTHINGHAM: I go down until I find the first statement and then I put it in the scrap basket.

SENATOR DONNELL: How far down do you have to go? DR. FROTHINGHAM: About the second line.

SENATOR DONNELL: Begins to be a misstatement about the second line? DR. FROTHINGHAM: I should think so.

SENATOR DONNELL: And you have not read the rest of it? DR. FROTHINGHAM: No.

SENATOR DONNELL: You do not know whether they cure up any of these alleged misstatements later, or do you, Doctor? DR. FROTHINGHAM: No.

SENATOR DONNELL: Doctor, we both realize, do we not, persons honestly believing on one side or the other are very apt to use language which you call "epithets," descriptive of others. You realize that is a tendency of human nature, do you not? DR. FROTHINGHAM: I try not to.

SENATOR DONNELL: I know you try not to, but that is a tendency of human nature? DR. FROTHINGHAM: I do not admit it. SENATOR DONNELL: You do not admit it. Then, the National Physicians Committee, you think, proceeds along the tendency that is not common to usual citizens when they use the term "socialized medicine" with respect to this bill? DR. FROTHINGHAM: Well, in the first place I have got to get the correspondence and get it clear what you mean by "socialized medicine."

SENATOR DONNELL: I was not attempting to define it, but there has been a good deal of criticism here by several witnesses of the propaganda issued by the National Physicians Committee, and much of it is centered along the use of the term "socialized medicine." Is that one of the points of criticism you make against their literature, that they call this bill "socialized medicine"? DR. FROTHINGHAM: No. I do not think I mind their calling it socialized medicine, provided they will define socialized medicine, but they put up a term and they give the impression that their socialized medicine is not my idea of socialized medicine.

SENATOR DONNELL: Doctor, let me ask you, what have you seen in that literature that is untrue, in your opinion? DR. FROTHINGHAM: I could not think of mentioning it now, but if you can give me a little time and the literature I can show you plenty of statements that are absolutely untrue.

SENATOR DONNELL: You have testified that when you get to the second line into the waste basket it goes? DR. FROTHINGHAM: Yes, sir.

SENATOR DONNELL: The literature consists of a good deal more than two lines ordinarily? DR. FROTHINGHAM: Yes, sir.

SENATOR DONNELL: I would like to know if you can think of one thing in all of this literature that you have received from time to time, from that material, that you think is untrue? DR. FROTHINGHAM: I cannot remember.

SENATOR DONNELL: How much of that literature have you received? DR. FROTHINGHAM: I have not any idea. How do you measure it?

SENATOR DONNELL: What? DR. FROTHINGHAM: Do you measure it by the ton? SENATOR DONNELL: How many tons have you received? DR. FROTHINGHAM: I do not know. I do not weigh it.

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SENATOR DONNELL: Have you received it over a period of months? DR. FROTHINGHAM: Yes. SENATOR DONNELL: Have you received twenty or thirty communications from that committee? DR. FROTHINGHAM: I do not think I counted them. That kind of stuff I do not remember. SENATOR DONNELL: I understand, but you have seen a good deal of their literature? DR. FROTHINGHAM: Yes. SENATOR DONNELL: And you are unable to give us a single, solitary statement of the substance that you think is untrue? DR. FROTHINGHAM: I have got to have the facts here. I would not like to make a statement I could not back up.

SENATOR DONNELL: You say in your testimony: "I challenge any fair minded person to deny that there are many misleading statements in the pamphlets, editorials and material which the National Physicians Committee sends out." You prepared this statement you read this morning, did you not, Doctor? Did you? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: Well, you say you "challenge any fair minded person to deny that there are many misleading statements in the pamphlets, editorials and materials which the National Physicians Committee sends out." Now, I just want to ask you to point out which statement in any of those pamphlets, editorials and material, one statement which you think was misleading. DR. FROTHINGHAM: Well, I will have to have the pamphlets.

SENATOR DONNELL: You do not remember any?

SENATOR MURRAY: Have you those pamphlets with you, Doctor? DR. FROTHINGHAM: No, sir.

SENATOR MURRAY: Has any one got a collection of those pamphlets here?

SENATOR DONNELL: Well, when did you prepare this statement, Doctor? DR. FROTHINGHAM: You mean what day of the week, or the week?

SENATOR DONNELL: What month did you prepare it? DR. FROTHINGHAM: I have been working on it, I should say, for the last month.

SENATOR DONNELL: Now, did you have any of these pamphlets, editorials and materials before you when you made this in your statement that you "challenge any fair minded person to deny that there are many misleading statements" in them? DR. FROTHINGHAM: I do not keep them.

SENATOR DONNELL: How do you know whether there are any misleading statements if you cannot remember a single solitary misleading statement in all of that literature? DR. FROTHINGHAM: I do not know, but that is the way my mind works. I am very sorry it does not work like yours.

SENATOR DONNELL: I expect that yours works better than mine, but have you had any specific untrue statements in mind when you issued this challenge to any fair minded person? You did not? DR. FROTHINGHAM: No specific one. SENATOR DONNELL: No specific one. DR. FROTHINGHAM: Just an accumulation. SENATOR DONNELL: But no specific one? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: Over how long a period have you been receiving this literature from the National Physicians Committee, would you say? DR. FROTHINGHAM: Ever since it started.

SENATOR DONNELL: When did it start? DR. FROTHINGHAM: I would have to ask them. It is probably in your records, is it not?

SENATOR DONNELL: You seem to have given some study to the formation of it. You say "when of late years the American Medical Association discovered that it might have its tax exempt status jeopardized if it undertook to influence legislation, it formed the National Physicians Committee." When did it form that committee? DR. FROTHINGHAM: I do not remember, sir. You must have all that in the records. It is a matter of record

SENATOR DONNELL: Were you present when the discussion of the jeopardy to the tax exempt status of the American Medical Association occurred? DR. FROTHINGHAM: I had nothing to do with the formation of the committee.

SENATOR DONNELL: How do you know that the jeopardy with respect to this tax exempt status was one of the things that caused the organization of the National Physicians Committee? DR. FROTHINGHAM: From statements from the committee. SENATOR DONNELL: From statements of the committee. In this literature that came to you? DR. FROTHINGHAM: Either in that or in correspondence. I would have to check on that. SENATOR DONNELL: You cannot remember which it was in? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: The committee informed you in some way, either through literature or through correspondence, that the reason for its formation was that the American Medical Association had discovered that the matter might jeopardize its tax exempt status? DR. FROTHINGHAM: That is right. SENATOR DONNELL: That is true? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: You cannot remember whether it was correspondence or literature that you learned it from? DR. FROTHINGHAM: Unfortunately not.

SENATO DONNELL: It would be rather unusual if it would be in the literature would it not, Doctor; that they would come out and advertise that because the association was fearful it was going to lose the tax exempt status that it had gone around the corner and organized this committee? You would not expect that to be in the literature scattered and broadcast, would you? DR. FROTHINGHAM: I do not know. I do not like that sort of stuff.

SENATOR DONNELL: Can you not remember whether you got a letter from any member of that committee on that subject? DR. FROTHINGHAM: No. SENATOR DONNELL: Did you carry on correspondence with that committee? DR. FROTHINGHAM: No. SENATOR DONNELL: With any member of the committee? DR. FROTHINGHAM: No.

SENATOR DONNELL: How did you get any information by any correspondence with any member of the committee if you did not carry on correspondence with them? DR. FROTHINGHAM: Because some of the organizations that I belong to do correspond with them.

SENATOR DONNELL: They correspond, and you have access to that correspondence. Do you remember seeing any correspondence to which you have access that tells about this tax exempt status? DR. FROTHINGHAM: No. I probably never saw it if it came in. SENATOR DONNELL: You probably never saw it? DR. FROTHINGHAM: That is right. SENATOR DONNELL: If you did not see it, how do you know what was in it? DR. FROTHINGHAM: I have got ears, and I trust my secretary. SENATOR DONNELL: Your secretary and your ears gave you this information? DR. FROTHINGHAM: I did not say that.

SENATOR DONNELL: Where did you get the information that the American Medical Association "discovered that it might have its tax exempt status jeopardized if it undertook to influence legislation." Where did you find that out? DR. FROTHINGHAM: Through organizations to which I belong that are interested in those things. SENATOR DONNELL: Which organizations? DR FROTHINGHAM: Well, one of them is the Physicians Forum SENATOR DONNELL: The Physicians Forum. Let us stop on that. Did it have correspondence from somebody that told you that? DR. FROTHINGHAM: How do I know that? SENATOR DONNELL: You say they had information. DR. FROTHINGHAM: They told me that. SENATOR DONNELL: Which member told you that? DR. FROTHINGHAM: I do not remember. SENATOR DONNELL: Was it Dr. Boas? DR. FROTHINGHAM: I do not remember. SENATOR DONNELL: You do not remember? DR. FROTHINGHAM: No, and I think I would be silly if I tried to fill my head with that sort of junk.

SENATOR DONNELL: You do not remember hearing of the Political Action Committee. You do not fill your mind with things like that in the newspapers, and you do not try to fill your mind with this sort of junk, as I believe you expressed it, of what doctors in the Physicians Forum spoke to you on this subject? DR. FROTHINGHAM: No. SENATOR DONNELL: Is that correct? DR. FROTHINGHAM: I do fill my mind with what they told me but I do not try to remember who told me and what day and what time. SENATOR DONNELL: I did not ask you what time of the day or night, or where it was, but I thought perhaps if you knew this so clearly that you would come here before this committee with the document you have been working on for the last month you probably would remember where you got the authority for making statements to that effect, but you do not seem to remember where you got that information? DR. FROTHINGHAM: I do not carry it in my head. SENATOR DONNELL: You do not carry it in your head? DR. FROTHINGHAM: I can send it to you with pleasure. SENATOR DONNELL: Did you have anything that would refresh your memory? DR. FROTHINGHAM: I do not carry that sort of junk in my head.

SENATOR MURRAY: May I ask a question? SENATOR DONNELL: Certainly.

SENATOR MURRAY: You recall that the National Physicians Committee has been making claims in the country that contributions to that organization would be tax exempt? DR. FROTHINGHAM: Yes.

SENATOR MURRAY: And they have got into a considerable controversy over that point, and during the presentation of the testimony here they were cross examined at some degree, with reference to their efforts to induce physicians to make con-

tributions to them on the basis that they could be deducted from their income tax reports. You have heard of that, have you not? DR. FROTHINGHAM: Yes.

SENATOR MURRAY: And of course you know that they have distributed a great amount of literature over the country without trying to tax your memory on what is contained in those pamphlets. You do know, in a general way, that those pamphlets have been considerably one sided and did not fairly present the bill which we are here considering at this time? DR. FROTHINGHAM: Again, so far as to say that, I think they were in many times actually dishonest.

SENATOR DONNELL: Doctor, I am curious to know how you know all this if you threw these things in the waste basket after you got to the second line. DR. FROTHINGHAM: Of course I did not throw all of them into the waste basket after I got to the second line.

SENATOR DONNELL: Let us take up some one that you completed. DR. FROTHINGHAM: I did not complete any. SENATOR DONNELL: You did not complete any. Do you remember any of them you read through from A to Z? DR. FROTHINGHAM: Certainly not. I get too mad. It makes me boil.

SENATOR DONNELL: You boil over after you get about 30 per cent of the way, is that right? DR. FROTHINGHAM: I guess so.

SENATOR DONNELL: I understood you to say a while ago that when you get these things, about the time you get to the second line or thereabouts you throw them in the waste basket. I am going to ask you the same thing again, Doctor. Maybe you have thought of it in the meantime. Can you tell us one single solitary word of any one of these documents you ever received from the National Physicians Committee that, in your mind, was untrue? DR. FROTHINGHAM: Not here. SENATOR DONNELL: Not here? DR. FROTHINGHAM: I can find them for you.

SENATOR MURRAY: Doctor, will you collect a few of those pamphlets and mark the points in them that you think are not truthful or misrepresent the facts and submit them to the committee? DR. FROTHINGHAM: I would be delighted to, if I can get them. Perhaps they will not give them to me now.

SENATOR DONNELL: I think they will, Doctor. Dr. Conrad, you are with that organization, are you not? DR. CONRAD: I am afraid I am. SENATOR DONNELL: Will you send the literature to Dr. Frothingham? DR. CONRAD: I will send the entire file. DR. FROTHINGHAM: I would rather have the entire file. SENATOR DONNELL: Very well. Then the doctor will mark what he thinks is untrue.

DR. FROTHINGHAM: I do not know if I will guarantee to mark everything I think is untrue, because I might have to send the whole file back to you, Senator. SENATOR MURRAY: Do the best you can. DR. FROTHINGHAM: In the limited time.

SENATOR DONNELL: Now, then, Doctor, in your statement here you give quite a number of comments here on the American Medical Association. You "challenge the claim of the spokesmen for the American Medical Association that 90 per cent of the practicing physicians in the United States are against this bill." DR. FROTHINGHAM: Yes.

SENATOR DONNELL: In the first place, Doctor, you have not undertaken to make a poll of the physicians of this country to find out how they stand, have you? DR. FROTHINGHAM: That is correct.

SENATOR DONNELL: Over a little further in your statement, in fact the next sentence, you say "Probably it is true that a large majority of the members of the governing bodies of the various state medical societies and of the House of Delegates of the American Medical Association are opposed to this legislation." DR. FROTHINGHAM: I think that is correct.

SENATOR DONNELL: Well, now, Doctor, these members of the governing bodies of the various state medical societies, they are just doctors, are they not? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: Picked right out of the states, out from the practicing field of doctors; is that right? DR. FROTHINGHAM: Picked is correct. Hand picked.

SENATOR DONNELL: You say they are hand picked, but they are elected by somebody. DR. FROTHINGHAM: That is right.

SENATOR DONNELL: And the doctors are the people that elect them, are they not? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: They are just common ordinary doctors elected by other doctors; is that not right. DR. FROTHINGHAM: They are hand picked, common ordinary doctors.

SENATOR DONNELL: Who produces them? DR. FROTHINGHAM: I was quite a picker when I was president of the Massachusetts Medical Society.

SENATOR DONNELL: You picked them yourself. DR. FROTHINGHAM: Yes.

SENATOR DONNELL: You say in Massachusetts. I am kind of afraid to get into Massachusetts. Let us get over into the state of Missouri. DR. FROTHINGHAM: I have heard of it.

SENATOR DONNELL: You have heard of it. I am glad you have, Doctor. I was a little afraid when you said you never heard of the P. A. C. that you might never have heard of Missouri. DR. FROTHINGHAM: You must remember, sir, I vote the Republican ticket.

SENATOR DONNELL: That is fine. I am glad to hear that. Doctor, going into Missouri, for instance, just to localize it, the doctors there elect their representatives to go down to their state society, do they not? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: And, in fact, the general practitioner, whether he is elected or not, can go to the state society, can he not? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: Can he vote when he gets there, do you know? DR. FROTHINGHAM: I would not know the rules.

SENATOR DONNELL: How about Massachusetts. DR. FROTHINGHAM: In Massachusetts we have a council. SENATOR DONNELL: Yes. DR. FROTHINGHAM: And that council is made up of men, as I said in here, elected by the county society.

SENATOR DONNELL: By the county society. Pardon me. DR. FROTHINGHAM: And the county societies vote on men not put up through anything similar to a direct primary but on candidates appointed by the committee appointed by the president and, of course, anybody else can file nomination papers, but, practically, it does not happen.

SENATOR DONNELL: In other words, to localize it down so that I do not get lost in the multitude, take one county. DR. FROTHINGHAM: Yes.

SENATOR DONNELL: County No. 1 in Massachusetts. DR. FROTHINGHAM: Yes. Assume I am president of the county society.

SENATOR DONNELL: What is the operation there? DR. FROTHINGHAM: I nominate a committee of my friends, usually, and they nominate a group of their friends to be voted on for councilors, and then that slate is voted on by the county society. SENATOR DONNELL: Now, in the first place, when you are selected as the president in that county, it is the doctors who select you, is it not? DR. FROTHINGHAM: No. The council.

SENATOR DONNELL: The council. Well, they are selected by the doctors, are they not? DR. FROTHINGHAM: They are elected by the doctors after what I claim is not a fair way of having an open election. SENATOR DONNELL: Well— DR. FROTHINGHAM: There is no direct primary, if you know what that means. I am not sure I do, but I think I do.

SENATOR DONNELL: At any rate, you know it better than I do, but the fact is that through such means as the doctors have thought practicable, the doctors in a given county that belong to the county society try to select members of their council, do they not? DR. FROTHINGHAM: There is a great deal of complaint against the system. SENATOR DONNELL: Maybe there is. I am not questioning that. Maybe there is room for improvement, but at any rate the plan in effect is a plan that has not been superimposed on the doctors by the lawyers or the plumbers or somebody else? DR. FROTHINGHAM: I guess the lawyer boys wrote the by-laws. SENATOR DONNELL: At any rate, the doctors adopted the plan of selection? DR. FROTHINGHAM: That is right. SENATOR DONNELL: So that in a given county the doctors in that county, through this defective, if it be, but nevertheless the existing plan, select the members of the council in their county. That is right, is it not? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: And then that council selects a president? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: And it is not apt to be true that a man would be selected president that, generally speaking, the doctors in the county would not want for president? DR. FROTHINGHAM: Well, they elected me president.

SENATOR DONNELL: They thought you were a man of standing and integrity and good judgment, or they would not have elected you. You need not answer that, because it would call for a compliment to you, but I assume— DR. FROTHINGHAM: I would like to put in right there, I think I was a hand picked president.

SENATOR DONNELL: Leave yourself out of it, Doctor. The fact is, is it not, that, generally speaking, the officials that are selected in a given county are officials in whom the doctors of that county have confidence; that is true, is it not? DR. FROTHINGHAM: I would not agree to that always. SENATOR DONNELL: Not always, but generally speaking, that is true, is it not? DR. FROTHINGHAM: I do not know. I would like to see a popular election held in the state society and see what the result would be.

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SENATOR DONNELL: Let us put it conversely: Do you think that the doctors selected as the head of the state societies and the counties of Massachusetts, as a general rule, are opposed to the views that the doctors in their respective counties have? DR. FROTHINGHAM: I know in a good many instances they are opposed to the view of a certain number, but there is no way of telling where the majority is, as I see it.

SENATOR DONNELL: Doctor, we could carry this on all morning, and I will not go into it further, but the fact is that the doctors through some means of selection, whether it is defective or not, do choose their councils in their local societies and the councils choose their presidents? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: And, generally speaking, to say the least of it, those presidents are honorable, upright men. That is right, is it not? DR. FROTHINGHAM: I hope we all are.

SENATOR DONNELL: That is what you generally expect of the officers of the medical society; is that not right? DR. FROTHINGHAM: We think all doctors are.

SENATOR DONNELL: I know, Doctor, but just answer that. Generally speaking, do you think the officers of these medical societies are men that at least think they are doing the right thing and are trying to do the right thing? That is correct, is it not? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: From the forty-eight states of the Union, after they have chosen their state house of delegates, there are chosen some various men, and I will not go into detail, but there are chosen from each state, one or more men as members of the House of Delegates of the American Medical Association. That is right, is it not? DR. FROTHINGHAM: That is right, yes.

SENATOR DONNELL: And you spoke about the lawyers. You probably know this. The American Bar Association was so much attracted by the House of Delegates plan of the American Medical Association that I think I am correct in stating, and it is a historical fact, that the American Bar Association was largely moved in the incorporation of the house of delegates plans by reason of its belief that it had worked well in the American Medical Association. At any rate, it is the method of government that the American Medical Association has adopted, is it not? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: And these delegates that come into the House of Delegates, is there any reason why they would be trying to put across some expression of sentiment that differs from their constituent doctors back at home? DR. FROTHINGHAM: Some of their constituents. They do not represent the unanimous opinion of the doctors back home.

SENATOR DONNELL: That is true, of course. There are Democrats and Republicans in this country. There is one doctor that believes one thing, and another that believes another, just like you are in favor of this bill, and Dr. Sargent, who was here the other day, from Wisconsin, is against it. You cannot get anything worth while that is worth considering without a divergence of opinion. That is true, is it not? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: Therefore, it is impossible for the House of Delegates of the American Medical Association to express the views of every other doctor, but you do know the fact to be, do you not, Doctor, that in the first place the American Medical Association consists of over 125,000 physicians in this country? That is true, is it not? DR. FROTHINGHAM: I have been so informed.

SENATOR DONNELL: And I believe you say about 50,000 are outside the American Medical Association? DR. FROTHINGHAM: I have been so informed.

SENATOR DONNELL: That would include $^{125}/_{175}$ths of all the physicians in this country in the American Medical Association. That is right, is it not? DR. FROTHINGHAM: I believe so. SENATOR DONNELL: Sir? DR. FROTHINGHAM: I am not quite quick enough mathematically to get that.

SENATOR DONNELL: There are 125,000 in the Association, and I believe that is about what it is. DR. FROTHINGHAM: About that.

SENATOR DONNELL: And 175,000 altogether, the American Medical Association membership constitutes about $^{5}/_{7}$ths of all doctors in this country, or $^{125}/_{175}$ths; is that right? DR. FROTHINGHAM: That sounds right.

SENATOR DONNELL: And they have expressed themselves in the American Medical Association, through the House of Delegates, as being opposed to compulsory health insurance; is that not right? DR. FROTHINGHAM: The practicing physicians have not expressed themselves. SENATOR DONNELL: The American Medical Association House of Delegates has. DR. FROTHINGHAM: The House of Delegates of the American Medical Association, I understand, is opposed.

SENATOR DONNELL: Well, Doctor, you say you understand it. You know it to be a fact, do you not? DR. FROTHINGHAM: No.

SENATOR DONNELL: Do you not read THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, published by the American Medical Association? DR. FROTHINGHAM: Every now and then.

SENATOR DONNELL: Have they not set forth in that journal the official action of the House of Delegates showing passage of resolutions opposing compulsory health insurance? DR. FROTHINGHAM: That I do not know.

SENATOR DONNELL: Well, your general knowledge leads you to believe, however, that the American Medical Association House of Delegates has expressed itself as being opposed to national compulsory health insurance; that is correct, is it not? DR. FROTHINGHAM: That is my impression, yes.

SENATOR DONNELL: Now, Doctor, you say that you belong to two groups of practicing physicians, all members of the American Medical Association who are enthusiastic about the development of a national health program along the line of this legislation, S. 1606? DR. FROTHINGHAM: Did I say S. 1606? SENATOR DONNELL: You say along the line of this legislation. I assumed you meant S. 1606. DR. FROTHINGHAM: I think it is a little broader than that. SENATOR DONNELL: At any rate, along the lines of legislation calling for compulsory health insurance? DR. FROTHINGHAM: Along the line of legislation —yes. I think that is correct.

SENATOR DONNELL: One of those two groups is the Physicians Forum, which you say is a national organization with membership of six or seven hundred. Is that your best information as to the membership of it sir? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: Dr. Boas testified here some time back that it is about one thousand, but at any rate that is not a very great difference in numbers. The percentage is somewhat heavy, but we will say, at the outside, it would be in the neighborhood of about what Dr. Boas thinks. Now, Dr. Boas is also a member of this Committee for the Nation's Health, is he not? DR. FROTHINGHAM: I believe so.

SENATOR DONNELL: You know it, do you not, Doctor? DR. FROTHINGHAM: To tell the truth, I am so simpleminded, I would like to check again. If I could see the list and see who is on the committee, I would know. I do not carry those things in my head.

SENATOR DONNELL: Doctor, you are chairman of that committee, are you not? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: How large an executive committee do you have? DR. FROTHINGHAM: I think it says right here. I will have to refresh my mind on that point.

SENATOR DONNELL: Where does it say that? DR. FROTHINGHAM: Well, let us see. There is a board of directors of approximately twenty persons, with an executive committee of ten.

SENATOR DONNELL: All right. Ten. Do you know who those ten are? DR. FROTHINGHAM: Not without looking at the list. SENATOR DONNELL: Would you know any of them? DR. FROTHINGHAM: Yes. SENATOR DONNELL: Who would you know? DR. FROTHINGHAM: You have told me now that Dr. Boas is. SENATOR DONNELL: I asked you if he is. DR. FROTHINGHAM: I believe you. SENATOR DONNELL: Sir? DR. FROTHINGHAM: I believe you.

SENATOR DONNELL: I do not think I said he was on the executive committee. I said he was on the Committee for the Nation's Health. Now, you are the chairman of the Committee for the Nation's Health? DR. FROTHINGHAM: That is right.

SENATOR DONNELL: Dr. Michael M. Davis is chairman of the executive committee, is he not? DR. FROTHINGHAM: I believe so.

. . . . . .

SENATOR DONNELL: Doctor, this is not any aspersion on you, but I want to get at just who those that really organized this Committee for the Nation's Health are. Who did that? DR. FROTHINGHAM: I do not know. That is a tough one.

SENATOR DONNELL: Who was the first man you ever heard about it from? That is fine grammar I used there. But, from whom did you first hear about the organization of this committee? DR. FROTHINGHAM: Darned if I know. I would have to look that up in my files.

SENATOR DONNELL: Was it not Dr. Michael M. Davis? DR. FROTHINGHAM: It might well have been. I can imagine of no better organizer.

SENATOR DONNELL: I expect you are right. He is a pretty good organizer.

SENATOR MURRAY: Doctor, I might ask you a few questions there. Is it not a fact that you and other physicians like you have been interested in improving medical care in this country

and have been coming to Washington here and attending previous hearings that we have had on this problem and have been contacting and talking to people like myself, who have been interested in this problem for some time? I have known you myself personally for several years, prior to the organization of this committee, and I have known of your interest in this problem. DR. FROTHINGHAM: Yes.

SENATOR MURRAY: You have discussed it with me many times, and I have seen you at meetings where the matter is being discussed, so that the organization of this committee is an evolution. DR. FROTHINGHAM: That is right. SENATOR MURRAY: Which has been taking place in this country for a period of years. DR. FROTHINGHAM: That is perfectly true. It must be at least three years that we have been mulling over this subject.

SENATOR DONNELL: And, Doctor, your mulling culminated on the 23d of February of this year in the incorporation of this committee. Is that right? DR. FROTHINGHAM: The mulling brought out this particular group in favor of it. There are other groups working on it.

SENATOR DONNELL: Is Dr. John P. Peters also in this Committee for the Nation's Health? DR. FROTHINGHAM: I have got to look at that too. Yes, he is only a couple of lines lower down than Butler.

SENATOR DONNELL: Doctor, I will not ask you in detail on this, but without reference to your leaflet or your files, do you know anybody that is on this committee except yourself and Mr. Michael Davis? DR. FROTHINGHAM: Yes. SENATOR DONNELL: Who? DR. FROTHINGHAM: Well, now, let me think. I went to a meeting, or a couple of meetings in New York. There was a man by the name of Rothchild and a lady by the name of —— she had a wonderful suite of rooms. I cannot remember what her name was.

SENATOR MURRAY: Where did this meeting take place, Doctor? DR. FROTHINGHAM: Once in a house and once in the suite of rooms. We went to two meetings. I really cannot remember her name.

SENATOR MURRAY: You may use the pamphlet and refresh your memory if you desire. That is a practice in the legal profession.

SENATOR DONNELL: That is all right. I would really like for him to tell us if he has any memory about anybody there except Mr. Rothchild and this lady. DR. FROTHINGHAM: Yes. Dr. Davis, the nonmedical Dr. Davis.

SENATOR DONNELL: This is an organization meeting? DR. FROTHINGHAM: No, this is the executive committee. This is after the movement was over and the child had been born. SENATOR DONNELL: All right.

DR. FROTHINGHAM: I cannot remember her name to save my soul. It is lucky I am getting too old to practice, is it not? And then a lady by the name of Norman. She was not the one that owned the villa.

SENATOR DONNELL: You cannot remember the name of the lady who had the villa? DR. FROTHINGHAM: I will tell you—Dr. Davis can tell you that. SENATOR DONNELL: Dr. Michael Davis? DR. FROTHINGHAM: He is my memory man. SENATOR DONNELL: All right. Now, Doctor, on this other group you say you happen to belong to, the Committee of Physicians for the Improvement of Medical Care, Incorporated; how many members does that committee have? DR. FROTHINGHAM: I think we have somewhere around thirty.

(Dr. Frothingham named the members of the Committee of Physicians.)

SENATOR DONNELL: Doctor, I note with much interest the fact that you evidently do have a good memory on this Committee of Physicians for the Improvement of Medical Care, when you have given them right off. DR. FROTHINGHAM: I have been working on it for eight years.

SENATOR DONNELL: You are familiar with the organization of that committee? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: You know it up one side and down the other? DR. FROTHINGHAM: Yes.

SENATOR DONNELL: But the fact is that this Committee for the Nation's Health, of which you are chairman, you have to look at the literature on it, and Dr. Michael M. Davis is the real man behind the gun on that Committee for the Nation's Health? DR. FROTHINGHAM: I do not admit it.

SENATOR DONNELL: You do not admit it? DR. FROTHINGHAM: I do not take a chairmanship of any committee to be a dummy.

SENATOR DONNELL: I am sure of that, but your comparative familiarity with the Committee for the Nation's Health and the Committee of Physicians for the Improvement of Medical Care is very obvious from your testimony, and you are much clearer, I would say, on the Committee of Physicians for the Improvement of Medical Care than you are on the other; is that not correct? DR. FROTHINGHAM: I do not think so. I think you have got to get at what the Committee for the Nation's Health is trying to do, and on what it is trying to do I think I am quite familiar, and how we are trying to do it.

Statement of Gerard Swope, Honorary Vice Chairman, Committee for the Nation's Health

MR. SWOPE: I am a member of the Committee for the Nation's Health. That is the only body I represent here. SENATOR MURRAY: You are also a former president of the General Electric Company? MR. SWOPE: Yes, sir, but I do not represent them here.

Early in 1934, at the request of President Roosevelt, I outlined a plan where every man, woman and child in the United States, not only in business and industry but in agricultural, educational, philanthropic and domestic services, should be covered against the many hazards which confront every human being. Invalidity, and disability by accident, unemployment, old age and life insurance, all to be on a contributory basis from the individual and from the employer. The funds to be invested in government bonds and the plan administered by a central federal organization. At the President's request and appointment I was a member of the first Committee on Economic Security in the fall of 1934, when the original bill on federal social security was drafted.

I think the hazards to health of the large number of people of the United States is an insurable risk. Some individuals and families, because of their background and environment, have a great deal of sickness while others have much less, but there is no telling when an individual or a family will need medical care. Undoubtedly to some extent every one will eventually. Health insurance should become as firmly established as life insurance, which, based on scientific, actuarial study, provides coverage for millions of people. As every individual or family faces a possible need for medical care it seems clear to me that the wise and desirable way to meet this expense is for all to pay a modest premium regularly rather than a sum often very difficult to meet when illness comes. From the standpoint of the employer, he is interested in his employees being in good health and strength to do the best work of which they are capable. He is also interested in seeing that the employee is free from communicable diseases and free from as much worry as possible in regard to the health and medical care of his immediate family. The community is interested in seeing that every one receives adequate medical care, especially in large cities, where people live in close contact and mingle closely together in crowds on streets and transportation systems.

The Farm Security Administration program has a provision for medical care for some farm families, but in many of our rural sections the people cannot now obtain adequate service. In some countries such provision for medical care has been a fundamental part of the Social Security program, but such has not been the case with us in the United States, except for special classes of activities and industries. Rather than make these provisions for particular trades or classes, it would seem fairer and more desirable to have these provisions for all, especially as the burden is borne in part at least by the community in general. In brief, I believe that this coverage of medical care for every one in the United States should be provided which will round out the program of social security. Then all will be protected, and all will pay into the fund for this protection—the individual, the employer and the government—so no longer will it be true that millions of citizens are excluded from the benefits of a comprehensive social security system which directly or indirectly they are taxed to maintain.

SENATOR DONNELL: Mr. Swope, you have not actually studied the bill carefully? MR. SWOPE: I have read through the bill. As I said, I have not studied it carefully.

SENATOR DONNELL: You very frankly say in your statement "I have read the bill but I have not studied it carefully"? MR. SWOPE: That is right.

SENATOR DONNELL: Mr. Swope, you are a member of the Committee for the Nation's Health and an honorary vice chairman of it, are you? MR. SWOPE: Yes, sir.

SENATOR DONNELL: Have you been active in the work of that committee? MR. SWOPE: Not very active. I believe in its principle and I have subscribed to its efforts in supporting President Truman's bill.

SENATOR DONNELL: Do you mind telling us who it was convinced you to be an honorary vice chairman of that committee? MR. SWOPE: No, but I know a number of the

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members of that committee: Mrs. A. D Lasker, Dr. Davis of course. SENATOR DONNELL: Dr. Michael Davis? MR. SWOPE: Dr. Michael Davis and a good many others. While you were asking Dr. Frothingham I looked over there and I know about thirty members.

SENATOR DONNELL: When did you become an honorary vice chairman of the Committee for the Nation's Health? MR. SWOPE: Shortly after the President issued his message to Congress last fall. SENATOR DONNELL: Last fall? MR. SWOPE: Yes, sir SENATOR DONNELL: And you do not recall who invited you to become vice chairman? MR. SWOPE: No, I do not recall specifically.

SENATOR DONNELL: Do you recall who it was invited you to attend the first meeting you attended? MR. SWOPE: I suppose the secretary of the committee.

SENATOR DONNELL: Do you remember who invited you to become a member of the committee? MR. SWOPE: I should think that it may have been Mrs. Lasker.

SENATOR DONNELL: Mrs. Lasker? MR. SWOPE: She is a fellow trustee with me on the Hospital Insurance Plan of the City of New York and very much interested in this.

SENATOR DONNELL: Mr. Swope, the statement you have read today, was there any collaboration between you and any one else in the preparation of that statement? MR. SWOPE: No. No one saw it until this morning.

SENATOR DONNELL: Oh, Mr. Swope, may I ask you one further question before you leave us. Which Lasker family is that? MR. SWOPE: Mrs. Mary Lasker is the wife of Albert Lasker, is she not? He was on President Harding's—

SENATOR MURRAY: Mr. Albert Lasker?

SENATOR DONNELL: Mrs. Albert D. Lasker. That is the wife of Mr. Lasker? MR. SWOPE: That is the wife of Mr. Lasker.

SENATOR DONNELL: Do you know whether or not the contributions toward the expenditures of the Committee for the Nation's Health include contributions from the Lasker family? MR. SWOPE: I do not know.

SENATOR DONNELL: You are not informed as to the sources of the financial income of that committee or of the various committees interested in the advocacy of S. 1606? MR. SWOPE: I know I have said I would be willing to subscribe to it, because I believe in it, and I imagine Mrs. Lasker has, but I do not know.

Statement of Michael M. Davis, Ph.D., Chairman, Executive Committee of the Board of Directors of the Committee for the Nation's Health

(Mr. Davis discussed the bills, condemned voluntary plans; asked for lay control over plans.)

DR. DAVIS: If the A. M. A. leadership had been wise during the last few years and had meant business in expanding voluntary insurance it would have wholly abandoned the demand for professional control over medical care insurance plans. This attempt to control will prevent any extensive growth without governmental aid. Furthermore, it has also involved the effort to suppress other types of medical care plans. This attempt had a setback in Group Health Association in Washington but is now renewing itself in a different form through the passage of restrictive acts by various state legislatures. These laws, proposed by the medical societies, are nominally "enabling acts" for voluntary plans. Actually they assure control by organized medicine in the state as a whole and in every county where a plan might operate and may prevent the establishment of plans not under medical societies or even put already established plans out of business. Some of the more recently passed laws are especially restrictive. The law in Illinois, for example. You have just heard about the one in Wisconsin.

The Tennessee law, passed in 1945, is even worse. It gives to the state insurance commissioner, a layman, powers beside which those of the Surgeon General in S. 1606 are feeble. The commissioner has jurisdiction over rates, over the approval of hospitals, the scope of services to be offered and the conditions under which a doctor may be paid as to allow appeal from his decisions only on points of law, not of fact. This law has already forced the abandonment of plans serving poor farmers in Tennessee.

The future of voluntary plans under organized medicine is small and dark—or would be so if the A. M. A. and state societies were not more prepared to abandon the voluntary principle. They are, just as the Blue Cross plans are. Let us have compulsion on the taxpayers through a law like the Taft-Smith-Ball bill, or some other bill, to pay the voluntary plans for caring for the otherwise free or part pay cases. In other words, let the public guarantee all doctors' bills.

My original three questions may now be restated and answered:

One: Will voluntary health insurance plans unaided by government meet the needs? The answer is "No," and the question no longer needs to be argued because both the hospital plans and the medical society plans admit it and seek government action.

Second: How much should voluntary plans be aided by government? The answer is already in the Wagner-Murray-Dingell bill. Voluntary plans meeting approved standards should be able to continue to function within the national system. The bill S. 1606 is clear as to policy on this point but is not sufficiently explicit. Clarifying amendments should be added.

Third: Should voluntary plans be made the administrative agencies of a public plan? Certainly not in the manner wanted by the Blue Cross and the medical societies. To do as they request would be to hand over public money to private organizations (doctors or hospitals) controlled by people who will spend most of the public money on themselves.

Last year the Blue Cross people in New York State asked Governor Dewey's Medical Care Commission to let them keep on collecting payments from Blue Cross members; to let these members deduct their Blue Cross payments from the payroll deductions which would have been required by the state law then considered. The Blue Cross could then reduce its charges to low income people and the state fund would then make up the difference.

There are administrative complications in such methods which, if you start working them out, prove difficult if not impossible. The principle itself is wholly unsound. There has been a good deal of experience in this country and much in England and other countries with the use of private agencies for public purposes and with the payment of private agencies from public funds. This experience has demonstrated both possibilities and pitfalls. The present proposals of the medical societies and the Blue Cross would lead us into all the pitfalls. Let us not "ape" past experience by copying all its now admitted mistakes. A sound and stimulating place for voluntary plans would remain under the scheme of Senate 1606. All the health insurance funds collected by legally required payroll deductions would go into the national insurance fund, along with any general taxation that may be appropriated thereto. Out of the national fund, via publicly responsible local or state and local agencies, payments might be made for services rendered to eligible persons by nongovernmental organizations. Voluntary hospitals are one type of such organizations. Voluntary health insurance plans are another type. Such plans may be able to supply service of exceptional quality or with especial economy, or they may supply services supplementary to those covered by the public system.

(Dr. [Ph.D.] Davis criticized medical estimates of the cost of government controlled medical plans.)

SENATOR DONNELL: Dr. Davis, I understood you to say that the Committee on Research in Medical Economics does not engage in any legislative or promotional work. Is that right? DR. DAVIS: Yes, sir.

SENATOR DONNELL: I have in my hand a booklet entitled "Principles of a Nationwide Health Program" containing a "Report on the Health Program Conference." Are you familiar with that booklet? Dr. DAVIS: Yes, sir.

SENATOR DONNELL: I notice on the flyleaf of it, among other things, this: "This report, by its twenty-nine sponsors, is published with the cooperation of the Committee on Research in Medical Economics." That is the organization which does not engage in any legislative or promotional work, is it? DR. DAVIS: Yes, sir.

SENATOR DONNELL: It appears "Through the committee, arrangements were made for the meetings of the conference and of the subcommittees in the autumn of 1943 and in 1944." Is that true? DR. DAVIS: Yes, sir.

SENATOR DONNELL: And then further on the page "Copies of this report may be obtained from Committee on Research in Medical Economics." Is that true? DR. DAVIS: Yes, sir.

SENATOR DONNELL: What was the purpose of the issuance of this booklet if it was not of promotional character? DR. DAVIS: Its purpose was educational, sir. This group of people, twenty-nine persons, physicians and laymen, governmental and nongovernmental, was called together because of the belief that if we could get a group of relatively speaking

experts in this field from different points of view together, it might be possible to agree on principles which would be useful as a guide to those interested with legislation. This report contains a statement of principles. I might call your attention to the fact that the membership of that conference included governmental officials, included the director of medical services of Rockefeller Foundation, who, by virtue of their position, could not engage in legislative activities. This is a statement of principles. It does not deal with legislation. Some ten thousand of several editions were printed, and a few distributed free, and most of them sold at cost, at the price named there.

SENATOR DONNELL: Doctor, referring now to this booklet, of which copies may be obtained from the Committee on Research in Medical Economics, I call to your attention that whether that was issued for an educational purpose or a promotional purpose, which I understand you distinguish between, nevertheless in the joint statement by our distinguished chairman of this committee and Senator Robert F. Wagner and Representative Dingell, on this bill before this committte, is a very extensive quotation on pages 13 and 14 from this statement: "Principles of a nationwide health program." You recall that, do you not? DR. DAVIS: Yes, sir.

SENATOR DONNELL: So that whether it was originally issued for promotional or for educational purposes, if there be a distinction, it was in fact used in this statement by Messrs. Murray, Wagner and Dingell before this committee; that is correct, is it not? DR. DAVIS: Yes, sir.

SENATOR DONNELL: The very opening paragraph of this report, which may be obtained from the Committee on Research in Medical Economics, which paragraph starts with the words "American medicine at its best is unsurpassed" is the opening paragraph of the quotation which Senators Murray and Wagner and Representative Dingell used in their testimony before this committee; that is correct, is it not? DR. DAVIS: Yes, sir. May I comment on this? SENATOR DONNELL: Yes. DR. DAVIS: It seems to me that the Committee on Research in Medical Economics had reason to be very much pleased that a document formulated in this way was thought enough of by Senators of the United States to quote from in legislation.

SENATOR DONNELL: Yes. DR. DAVIS: Naturally, this group of people who came together believed and hoped that their findings and agreements would influence public action. We could have no educational work unless bodies reasonably detached from the immediate demands of legislation would address themselves to try to find out what are sound principles of public action. SENATOR DONNELL: Yes. DR. DAVIS: This group, however, did not itself and does not itself undertake to promote action.

SENATOR DONNELL: I think you mentioned that this report, "Principles of a Nationwide Health Program," was gotten out by twenty-nine persons? DR. DAVIS: Signed by twenty-nine persons, and the names are here.

SENATOR DONNELL: And they had nothing of the promotional idea behind this booklet at all; that is, I understand that from your testimony. DR. DAVIS: We have to draw a distinction between the attempt to promote action and educational endeavor. I like to stress on the educational work, which was the aim of this program.

SENATOR DONNELL: To whom was this report going to be distributed, Doctor? DR. DAVIS: When this report came out it was sent out to a small list of people. By "small" I mean probably about five hundred persons, who were on what you might say our regular mailing list of the Committee on Research in Medical Economics, having requested that we should furnish them with all publications we sponsored that we thought were important to them. Notices, of course, were given to newspapers and to the professional journals. As to the number, something like 9,000 copies were distributed, most on request and most of them paid for at cost, for all sorts of organizations and individuals all over the country.

SENATOR DONNELL: Doctor, this report issued, as it was, as I understand it from you, for educational other than promotional purposes—and I pause to state that it appears to me there may be a very tenuous line between those two—but I say, you draw the distinction. That report was published, as you have indicated, sponsored by these twenty-nine signers. The list of those signers appears in one of the early pages. I call your attention to the fact that of the twenty-nine, four, namely Will W. Alexander, Ernst P. Boas, Michael M. Davis and J. Raymond Walsh, are, as I understand it, and were members of the Political Action Committee of the C. I. O. Is that correct? DR. DAVIS: I would know that J. Raymond Walsh was, but I do not know whether the others were or not.

SENATOR DONNELL: You know you were? DR. DAVIS: I was not a member. I have been a member of the National Citizens Political Action Committee in New York, yes.

SENATOR DONNELL: That is connected with the C. I. O., is it not? DR. DAVIS: I think there is a distinction between that and the C. I. O. Political Action Committee. The National Citizens Committee is not a union organization.

SENATOR DONNELL: I call your attention, Dr. Davis, to the pamphlet, or the book, entitled "Investigation of Un-American Propaganda Activities in the United States," issued by the United States Government Printing Office in 1944, on House Resolution 282, particularly to pages 263 and 264, where I find "Exhibit No. 1." "National Citizens' Political Action Committee." The officers of which are Sidney Hillman, chairman, James G. Patton, vice chairman, Freda Kirchway, vice chairman, R. J. Thomas, treasurer, James H. McGill, comptroller, and Clark Foreman, secretary. That is the one you belong to, is it not? DR. DAVIS: I belong to the National Citizens Political Action Committee. I am not quite clear as to the bearing of the question. I would only say that any comment I might make on my membership would not be in the nature of an apology.

SENATOR DONNELL: I am not asking you to apologize. I am preceding this further examination by saying I am directing your attention pretty much for a time on this cross examination to the question as to whether or not there is a widespread general popular demand for legislation of this type, or whether it is largely a demand that is being built up through the efforts of committees with which you personally have been very largely concerned and are today. And that is not said against you. It is just pointing out the fact. I call your attention to the fact that in this particular book printed by the Government Printing Office at page 263, just preceding what I have read to you, this personnel, is the language "A comprehensive index at the conclusion of the volume will show the extent of the interlocking directorate between Hillman's organization and the organizations of the Communists." I call your attention also, Dr. Davis, that on page 263 Dr. Will W. Anderson, vice president, Julius Rosenwald Fund, North Carolina, is listed as a member of the National Citizens' Political Action Committee. That is the Dr. Will W. Anderson that participated in the preparation of this report, a copy of which may be obtained from the Committee on Medical Research—or Committee on Research in Medical Economics, is it, sir? DR. DAVIS: I assume so. It is the same name. I do not know about the other organizations; he was in this conference.

SENATOR DONNELL: Dr. Will W. Anderson, vice president, Julius Rosenwald Fund, that is right, is it not? DR. DAVIS: Yes.

SENATOR DONNELL: I call your attention also to the fact that Dr. Ernst Boas is listed on page 264 as a member of the National Citizens Political Action Committee. Does that refresh your memory as to whether he is or is not a member of that committee? DR. DAVIS: I have not been sufficiently active in the National Citizens Political Action Committee to know whether Dr. Boas is a member of it or not.

SENATOR DONNELL: And then you are listed at page 264 of this book to which I have referred, printed by the Government Printing Office, as being a member of that committee and described as the editor of *Medical Care*, New York. Were you editor of *Medical Care*? DR. DAVIS: At that time, yes.

SENATOR DONNELL: You were not a physician? DR. DAVIS: No.

SENATOR DONNELL: Was *Medical Care* a technical magazine? DR. DAVIS: *Medical Care* was published for four years by the Committee on Research in Medical Economics, a quarterly, devoted entirely to articles, reports, news of affairs in the field of the economic and social aspects of medicine. It did not deal with any clinical aspects. A study of disease. It dealt with the quality of medical care, voluntary insurance planning, developments in this field in other countries. In other words, the field of medical economics as distinguished from the study of diseases and diagnosis of treatment of diseases.

SENATOR DONNELL: You would feel that the field of study of diseases and diagnosis of treatment of diseases is a field properly to be taken care of by doctors? DR. DAVIS: Solely by physicians.

SENATOR DONNELL: In that connection, do you recall, Dr. Davis, in the bill S. 1606 the power of making rules and regulations to carry into effect the provisions of title II, which provisions certainly relate in large part to medical care and general benefits and treatment that the issuance of such regulations is entrusted, is it not, to the Surgeon General under the direction and control specifically under the terms of the bill,

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as he is, of the Federal Security Administrator, who is not required to be a doctor? You remember that, do you not? DR. DAVIS: I am quite aware of it. I would be glad to say that certainly, as Dr. Frothingham said earlier, is a fundamentally sound principle. The government of all our best hospitals in this country, the hospital board is typically an entire lay board, which lays down the rules under which the physicians are to practice in that hospital.

SENATOR DONNELL: You think that the laying down of rules and regulations under the terms of a compulsory health insurance bill which pertains not merely to the collection and distribution of moneys but to the administration of the medical benefits to be given to the people, treatment by physicians and surgeons, et cetera, you think it is advisable for the formation and promulgation of all such rules and regulations as that to be under the ultimate supervision and authority of a man not required by law to be a doctor? DR. DAVIS: That is exactly the principle on which the vast majority of our best hospitals in the United States have been operating for generations, sir, the Massachusetts Hospital in Boston, the Johns Hopkins Hospital, and so on, a lay board has entire authority of ratifying and adopting regulations under which the doctors may practice. It may say a certain doctor is authorized to do such and such kind of surgery. The final authority for them is in the hands of a lay board. It is standard hospital practice in this country.

SENATOR DONNELL: You favor the provision to which I refer in S. 1606? DR. DAVIS: Yes, sir.

SENATOR DONNELL: In regard to the ultimate authority residing in the federal social security administrator with respect to rules and regulations prescribed? DR. DAVIS: Yes. With the further proviso also contained in S. 1606, which is a proviso in matters of complaint. Where the subject matter is wholly professional in character, those issues on appeal or on complaint shall be heard by bodies which are wholly professional in their composition.

SENATOR DONNELL: Where do you find that in the bill? DR. DAVIS: In the latter part of the bill dealing with appeals and questions of review.

SENATOR DONNELL: Do you have that copy of the bill before you? DR. DAVIS: I have a copy. I can find it without much difficulty. It comes in the latter part. It relates to appeals and review. It brings out the point, Senator, that when you are dealing with matters where the issues are wholly professional, only physicians can handle them. Or only physicians can recommend to a lay board what they should do.

SENATOR DONNELL: I am wondering if you can put your hand on that particular provision you refer to about the appeals.

SENATOR MURRAY: Page 53, starts with "Appeal; Judicial Review; Limitations upon the Powers of the Surgeon General."

SENATOR DONNELL: Now, if you will just point out the particular language there, if that is it. DR. DAVIS: It is at the bottom or toward the bottom of page 53: "Provided further that, with respect to any complaint or dispute involving only matters or questions of professional practice or conduct the hearing body shall consist exclusively of such professional persons."

SENATOR MURRAY: "Shall consist exclusively."

DR. DAVIS: Exclusively of such professional persons. It is toward the bottom of page 53, section 207(a).

SENATOR DONNELL: I see the language to which you refer, but will you look just above that, on line 17: "Provided, That with respect to any complaint or dispute involving matters or questions of professional practice or conduct the hearing body shall contain competent and disinterested professional representation." There is nothing there to say whether it shall be the majority under that, is there, of the professional representatives? DR. DAVIS: I think one must take those two clauses together.

SENATOR DONNELL: I get your point, Dr. Davis, and yet I call your attention also to the fact that back on pages 35 and 36 it is provided that the Surgeon General shall perform the duties imposed on him by this act "under the supervision and direction of the federal security administrator," which leads me to this further point: I am obliged to you for calling attention to this point, this clause here, and it is very interesting. May I say this, however, that, as I see it, tentatively, at any rate, the administration of the bill is given to the Surgeon General, subject to the supervision and direction of the federal security administrator, and only in the event an individual takes an appeal from the action of these officials do these provisions to which you refer on page 53 of the bill come into operation. That is correct, is it not? DR. DAVIS: I am quite aware of that, Senator. SENATOR DONNELL: Yes.

DR. DAVIS: I would like to mention another type of experience other than the hospitals. I mentioned in my testimony, but very briefly, there has been large experience in this country, especially in depressions, for instance, for furnishing tax supported medical care for needy persons. In Chicago, where I was during most of the depression, there were something like 400,000 persons receiving currently medical care from tax supported funds through a county relief administration run by the county authorities under a lay director. How was that organized? It was organized with a medical supervisor, with a former president of the Chicago Medical Society as chairman. I saw quite a little of its administration, because I was pulled in in an informal capacity as adviser. Direction and control of those funds in paying physicians anl hospitals for the care of needy persons was controlled by lay public authorities, exactly as in this bill. Any sensible group of lay public authorities can decide professional questions on the advice of a professional advisory body, and they appoint a professional advisory body in which they have confidence, and in 95 per cent of all cases the recommendation of that professional advisory body will go through without the smallest question. The reserve power on the part of the board of trustees of Johns Hopkins Hospital or of the welfare department of New York to determine ultimate policy involving medical care of people when paid for by insurance funds or public funds is fundamental. In other words, I would just like to add, I believe these provisions in the bill are consistent with long experience in this country in the administration of organized medical services and are consistent with the best medical services which we now have in our best teaching institutions, in our best examples of service in this country. I do not want to decry what private individual practice does, but I do think that our leading examples of medical care are centered around teaching institutions where our young medical men are trained. Those medical services are worked under the direction of lay bodies, some of them governmental bodies, as in the case of the University of Michigan and the Medical School of Wisconsin.

(*There was considerable discussion as to professional or lay representation on appeal boards.*)

SENATOR DONNELL: I note that the president of the Julius Rosenwald Fund is Edwin R. Embree, and I note also in this publication before the House Committee on House Resolution 282 that Edwin R. Embree, president, Julius Rosenwald Fund, Illinois, was then also a member of the National Citizens Political Action Committee.

SENATOR MURRAY: That was a sort of roll of honor, apparently, for all the distinguished people that I have heard of in recent times seem to be on that list. That is the Dies work, is it?

DR. DAVIS: I am not familiar with it. I imagine most of them are my good friends. I am afraid that may be the case.

SENATOR MURRAY: This is a committee organized over in the House by Martin Dies, who became so odious that he was finally defeated and is now out of the Congress. He was the one that set up this committee entitled "Committee on un-American Activities, House of Representatives," and apparently the people finally discovered that the activities of that committee were so un-American that they had to defeat Dies when he came up for election.

SENATOR DONNELL: Now, I was referring, Doctor, to this report of the Julius Rosenwald Fund, page 10, of which I notice the statement that "altogether during the years 1933 to 1935 about 160,000 pamphlets and articles were distributed by the fund, mostly on request." Does that mean 160,000 pieces of literature or 160,000 separate pamphlets; that is to say, separate publications? DR. DAVIS: It means 160,000 different items. Some of them were the same, of course. I remember some of our reports which we distributed may be 15 to 25 thousand; others a few thousand.

SENATOR DONNELL: 160,000 pieces of literature? DR. DAVIS: Of perhaps a dozen or fifteen different kinds. SENATOR DONNELL: And then this same organization, the Julius Rosenwald Fund, has, as appears from page 25 of this book, made a grant of $165,000 to the Committee on Research in Medical Economics to be used over a five year period. DR. DAVIS: Yes.

SENATOR DONNELL: That is the same Committee on Research in Medical Economics from which copies of this report which were mentioned by Senators Wagner, Murray and Representative Dingell in the statement before this committee was issued? DR. DAVIS: That is correct.

SENATOR DONNELL: Now, Doctor, going back to the question here as to the popular demand, if any, or what it may be for legislation of this type, you have been very active, have you

not, Doctor, in the formation and presentation of arguments in favor of this bill generally? That is true, is it not? DR. DAVIS: Yes.

SENATOR DONNELL: For instance, on the Committee for the Nation's Health, for which you appear here today, of which Dr. Frothingham is the chairman, you are the chairman of the executive committee? DR. DAVIS: Yes.

SENATOR DONNELL: And Messrs. Goldman, Boas, Allan Butler and John P. Peters, three of whom have testified before this committee and possibly four but I am not certain; yes, Dr. Goldman has testified; all of whom have testified before this committee, they are other members of that Committee for the Nation's Health. That is correct, is it not? DR. DAVIS: Yes.

SENATOR DONNELL: Was it through your work that Dr. Channing Frothingham was made the chairman of that committee? DR. DAVIS: I think I can only answer that by explaining a little more about the way the committee was organized. Dr. Frothingham gave part of it. Actually, in getting an organization of this kind, some times around ten or a dozen people have to get the thing going. The ten or a dozen people are mostly now the members of the executive committee. If you care to have those names, I will give them to you. If you care to have the names of the executive committee into the record:—We considered who would be the most desirable chairman. We decided that a physician should be chairman of such a committee. We considered various physicians whom we knew were favorable to the principles that we were going to advocate. We decided, eight or ten of us, that Dr. Frothingham would be desirable. I went to Dr. Frothingham personally and asked him on behalf of this group: "Would you come in in this capacity?" and he said "Yes."

SENATOR DONNELL: Doctor, going back for just a moment to this Committee on Research in Medical Economics, seven of those twenty-nine persons are federal employees, namely Dean A. Clark, M.D.; I. S. Falk, Ph.D.; Frederick D. Mott, M.D.; George St. J. Perrott; Kenneth E. Pohlmann; Barkev S. Sanders; William Haber. Those are all United States government employees? DR. DAVIS: I am not sure whether Mr. Haber is now. He was at the time, I think, in the War Labor Board.

SENATOR MURRAY: I might ask a few questions? SENATOR DONNELL: Certainly.

DR. DAVIS: May I say on that, if I may, Senator Murray, that at the time this group got together I consulted Dr. Parran, for example, "Would it be possible for me to ask Mr. Perrott, chief of one of his main divisions of Public Health Service, to serve in this group for this purpose," which I explained. He was satisfied that the group coming together was coming together as an expert body to try to agree on principles, and he agreed to Mr. Perrott's coming in, understanding that the same thing was done with Mr. Altmeyer with respect to Mr. Falk, and Mr. Sanders in the Social Security Board. In other words, these officials who came in got clearance from their appropriate chiefs of their services, understanding that this group was coming together as a body of experts obviously which could not come in under the Hatch Act or otherwise if this had been a group which was going to formulate legislation and advocate it.

SENATOR DONNELL: Did you perform any work along with Dr. Falk in preparation of S. 1606? DR. DAVIS: No official work, in the sense that I was not acting as an official. I sought an occasion with Mr. Falk. With Mr. Falk and other people, such as representatives of labor groups interested in this discussion, a number of the provisions of it. I have been asked many times on this and on preceding legislation to take part in suggesting or formulating or advising on some of these matters.

SENATOR DONNELL: You observed that Dr. Falk did a very material part in the preparation of S. 1606? DR. DAVIS: I could not say how much he did, but I know he was part of it.

SENATOR DONNELL: Going back to this Committee for the Nation's Health, whose original idea was it that caused that committee to be formed? Was it yours? DR. DAVIS: I should not say so. This was just one of the things. The history of it is this: During the last three or four years there has been no organization since the demise of the American Association for Social Security that has been interested in giving itself to the promotion of legislation in this field. The Association for Social Security, headed by Abraham Epstein, was active until his death, about four years ago. A considerable number of people are interested in this legislation. In labor, academic groups, expert groups, Liberal physicians, they have felt the need for something. When the President's message came out, it immediately created the feeling among at least twenty-five people that I could name now, on this committee. "This is the occasion on which we can draw people together and endeavor to get support to get such an organization going." At the time of the advertisement I noticed Mrs. Shearon had there, that was endorsing President Truman's program, the people who signed that—it was an obvious step to move from that and organize this committee, which was done during the months of December and January. An incorporation was finally consummated in February.

SENATOR DONNELL: Now, Dr. Davis, have you received any compensation from the Social Security Board within the last year or so for services rendered to it? DR. DAVIS: I have been for a number of years—I do not know, seven or eight years—an official consultant in health studies for the Social Security Board. Such an appointment carries with it a per diem compensation for time actually spent in consultant work for the board. SENATOR DONNELL: $18.05 a day? DR. DAVIS: Yes, just about, yes, sir. And I think in 1945, if I remember, I do not think I gave any day—the year before that, in 1944, I probably spent four or five days on direct work for the board, for which I was compensated. I think in 1945 I did not. I have occasionally, during 1945, talked over some studies with them. Technical matters. I do not think I gave enough time to warrant putting in a bill for a day's service.

SENATOR DONNELL: Have you received any compensation or become entitled to any compensation for work done during 1946? DR. DAVIS: No, sir.

SENATOR DONNELL: From the Social Security Board? DR. DAVIS: No.

SENATOR DONNELL: Now, Doctor, the Committee for the Nation's Health has been very active in the issuance of releases, has it not, to the press, in connection with various matters pending before this committee in respect to S. 1606? That is correct, is it not? DR. DAVIS: Yes.

SENATOR DONNELL: For instance, we had a witness here the other day, Mr. Alfred Baker Lewis, president of the Union Casualty Company of New York. Did the Committee for the Nation's Health issue a press release containing an outline of what his testimony was? DR. DAVIS: I saw such a release.

SENATOR DONNELL: He told us he had never been associated with that committee but he had been informed that he could get the publicity from them. Your committee issued that release? DR. DAVIS: That is true for a good many other witnesses also.

SENATOR DONNELL: Can you give the other witnesses? Doctor, do you have any idea about how many witnesses you have issued press releases for for the Committee for the Nation's Health? DR. DAVIS: I could hardly say. I would say between twelve and twenty. I cannot give you more closely.

SENATOR DONNELL: This release in regard to the telegram about which Dr. Frothingham today testified, that release was issued by the Committee for the Nation's Health? DR. DAVIS: Yes.

SENATOR DONNELL: Doctor, at the time that was issued, did you know that instead of the group of physicians sending a telegram to Dr. Frothingham containing this language, as it reads here: "'We believe from available experience,' the telegram reads, 'that voluntary health insurance plans' . . ." and so forth, did you know that the facts were that Dr. Frothingham had sent out a telegram containing this language that has been quoted and asking whether or not he might have the signatures of these people? Did you know that? DR. DAVIS: Yes. Dr. Frothingham came to New York and showed me a batch of telegrams which he had received from the physicians in response to a telegram he sent. Some of them quoted his telegram in full and others merely telegraphed "You can sign my name to such a telegram as you sent me." On the basis of that, the release was prepared.

SENATOR DONNELL: I submit to your consideration, this is a matter on which everybody is entitled to opinion, and yours may be better than mine, but I submit the fact that the inference which would be drawn from this language appearing in the release of April 17 that "a distinguished group of physicians, all members of the American Medical Association, in a telegram to Dr. Channing Frothingham, . . . took sharp exception to the A. M. A. stand . . ." and "'We believe from available experience,' the telegram reads, 'that voluntary health insurance plans will be too costly . . .'" and then the list of physicians signing the telegram includes . . ., I think the inference is that that indicates that Dr. Frothingham did not originate that telegram, and I respectfully suggest for your consideration that the query as to whether or not in determining whether this was a voluntary uprising of these physicians that are listed here, it would have given a better picture of it had it indicated, as Dr. Frothingham does, that he originated the

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language, sent it out, and they simply approved it? DR. DAVIS: I would say the impression toward a person, or toward me, if I were myself in the position of a member of the Senate, somewhat sophisticated in these matters, it would be that these telegrams did not come as an uprising but came at the request of somebody who had communicated with a group of doctors to know how they stood on this matter. That would be what I would assume, and that was the way the man thought that prepared the release would be the general impression.

SENATOR MURRAY: It is the accepted form of public release, such as the National Manufacturers Association, and the Chamber of Commerce frequently follow. We have got customs here, and we understand they are supposed to be brief, and naturally they could not put out all the details of the matter, and I do not think any one is misled by them.

SENATOR DONNELL: I was not addressing myself critically to the brevity of it. The point I was making is that there was nothing in the press release to indicate that this thought of a sharp exception to the A. M. A. stand had originated in Dr. Frothingham's mind. While I appreciate some one would have to phrase the telegram, since it could not be phrased by all twenty-six or fifty of them, nevertheless I do not think there is any indication on this release that it did not come from some one or more of these physicians who signed. In other words, the point I make is that there is no indication here that Dr. Frothingham originated the idea as distinguished from some one or more of these signers. The point I am driving at, Doctor, is the question as to the existence of this great public demand, that sixty-six people had sent in a telegram and nothing to indicate that it was not a perfectly spontaneous effort from them, even though prepared by one of them, whereas in fact the document originated in the mind of one man, Dr. Frothingham, and perhaps it may not have originated there. It might have been suggested to him. Did you give any thought to the preparation of that telegram?

DR. DAVIS: Dr. Frothingham formulated it himself. He lives in Boston. I live in New York. SENATOR DONNELL: I see, yes.

SENATOR MURRAY: If sixty men answered the telegram and were in accord with what he expressed in the telegram, it seems to me that that would be an expression on the part of all of them that they regarded it as they expressed it in the telegram.

DR. DAVIS: May I add this: that the response of those physicians was to me extremely important, because I am convinced that for every physician who would be willing to come out publicly in favor of this bill there are ten who would be unwilling to come out publicly, although they might be prepared to do so privately. I regard it as quite significant that as many physicians as this were prepared to give public expression of their belief in it.

SENATOR DONNELL: Dr. Davis, is it a fact that, as a part of the work of this Committee for the Nation's Health, there have been engaged the following persons who have attended frequently hearings on this bill; namely, Peggy Stein—is that correct? DR. DAVIS: Yes.

SENATOR DONNELL: And the salary of Miss Stein is being paid by whom? DR. DAVIS: Miss Stein happens to be contributing her service. She is paid simply expenses. She has been contributing her services since the first day of January.

JUNE 27, 1946

HONORABLE JAMES E. MURRAY Presiding

PRESENT: Senators Murray, Morse and Donnell.

Statement of Dr. Stephen S. Wise, President, American Jewish Congress

Rabbi Wise said:

"There is no one living in America who has been the beneficiary of more wise, helpful and, under God, saving medical counsel and practice than I. . . . They have recognized, in dealing with me, that I am a poor ordinary minister, so that they have had a minimum of gain as compared with a maximum of benefit which I have had from them. Some of them, I am sure, will think it is ungracious for me to come and speak for this national health bill, but this is my feeling, gentlemen: What I have had, through no deserving of my own, merely because of personal friendship and generosity of a number of great physicians and surgeons, I would like to have for all American citizens.

"That is why I support this bill. I feel that unless men are of circumstances far beyond my own circumstances and far above the average of income in America, they cannot have what has been given to mine and to me, the most expert care and skill which I cannot help saying to you, under God, has saved my life surgically on two occasions."

. . . . . .

DR. WISE: Some of my dearest medical and surgical friends would be horrified. I am not interested in the gentlemen who run and manage the American Medical Association, which is a highly professional organization, which I believe does not tell the whole truth to its membership. I am not interested in them, but I am interested in some very, very, very skilful men, men at the top of their profession, who I feel will fail to understand why I, their friend and beneficiary, from the medical and surgical point of view, should appear on behalf of this bill.

(Rabbi Wise mentioned some of the many organizations of which he is founder and president.)

But I do not purport to represent the hundreds of thousands of people within those organizations.

I must say in answer to your question, Mr. Senator, that I find much to my delight that some of the finest men in the medical profession accept the act which bears your name in part as inevitable. They know it is coming. Some of them think they can postpone its coming for a time, but I wonder—and I am just throwing out a suggestion which could or could not be accepted—I wonder if a referendum or a plebiscite were taken of the medical profession, whether you would not get a good majority of the medical men to support the Wagner-Murray-Dingell bill. I believe they would. I have no right to say that. I am just hazarding a guess.

SENATOR DONNELL: Your observation is that a number of doctors whom you know do not favor the idea of governmental insurance; that is correct, is it not? DR. WISE: I take that for granted. SENATOR DONNELL: Yes. DR. WISE: Judging by something said to me by one of the great surgeons in America, namely, Dr. Albert A. Berg of New York. He is an outstanding surgeon, who railed against it. He considers it, I think most unwisely, a dangerous aim.

SENATOR DONNELL: He is one of the outstanding surgeons of America? DR. WISE: Yes, with an income running between a quarter million and a half a million a year for forty years.

SENATOR DONNELL: Rabbi Wise, have you observed also quite a good many of the physicians of smaller income are also opposed to the theory of governmental health insurance? DR. WISE: I find, Senator Donnell, that the more enlightened men, and there is a difference in the degree of enlightenment of physicians, apart from their medical and surgical skill, that the most enlightened and forward looking men in the medical profession with whom I have discussed this, by a large majority, favor the passage of this bill. They think its disadvantages are minor and the gains to the American people will be major.

SENATOR DONNELL: But you do know, I assume, Rabbi Wise, that there are a great many physicians of moderate income who are also opposed to this bill? DR. WISE: I cannot help saying to you, Senator, largely because they have been propagandized against the bill by THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, of which I believe Dr. Fishbein, if that is his name, is the editor. He has worked assiduously against this bill, and indeed against any measure looking to national sickness insurance.

. . . . . .

SENATOR DONNELL: Going back again to this matter of whether the opposition among the doctors to this bill is confined to those of high incomes, I presume you know of the fact that the American Medical Association contains somewhere upward, I believe, of 125,000 of the physicians in this country? DR. WISE: Yes, sir.

SENATOR DONNELL: Now, of course, that would include a great many physicians of medium and lower income brackets? DR. WISE: Yes.

SENATOR DONNELL: And you know of the fact that the House of Delegates of the American Medical Association has expressed itself in opposition to this type of legislation? DR. WISE: Yes. May I add this observation: Can you think at the moment of any great gain that has come to America without objection on the part of those whom it touched in one way or another? I am old enough, I am sorry to say, to remember when it was first proposed to have an income tax bill in America. You know how it was fought. You, as a lawyer and a judge, would know. SENATOR DONNELL: I was not a judge. DR. WISE: Forgive me for the insult. SENATOR DONNELL: Well, that is a very high compliment. I appreciate the compliment. DR. WISE: I had heard you were on the bench and therefore you were too skillful a cross examiner.

THE END

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

ARIZONA

Navajo Clinical Conference. — The Ganado Mission announces the seventh Harlow Brooks Memorial clinical conference, August 29-31, at the Sage Memorial Hospital, Ganado. Among the speakers will be:

Dr. Philip Thorek, Chicago, Differential Diagnosis of the Acute Abdomen.
Dr. Joseph M. Greer, Phoenix, Surgery in a Naval Hospital.
Dr. Newell Jones, Hollywood, Calif., Are We Raising Test Tube Children?
Dr. James P. Rigg, Grand Junction, Colo., Headaches.
Dr. Robert S. Flinn, Phoenix, The Treatment of Edema with Low Sodium Acid Ash Diet.
Dr. Alfred E. Gallant, Los Angeles, The Use of Intermedullary Metal Pins in the Treatment of Fractures of the Long Bones.
Dr. John H. Patterson, Phoenix, Basket Type Suspension of the Urinary Bladder for Third Degree Prolapsus of the Bladder and Uterus.
Dr. Edwin F. Boyd, Los Angeles, The Challenge of Bikini.
Dr. Herbert Acuff, Knoxville, Tenn., Tumors of the Breast.
Dr. Buell H. Sprague, Los Angeles, Let Them Split Their Own Proteins.
Dr. Thomas G. Orr, Kansas City, Mo., Surgery of the Gall Tract.
Dr. Carl F. Rusche, Hollywood, Urologic Problems in the United States Navy.
Dr. Max Thorek, Chicago, Eleven Years' Experience with Electrosurgical Obliteration of the Gallbladder Without Drainage.
Dr. William H. Daniel, Los Angeles, Recent Developments and Treatments of Cancer of the Rectum and Colon.
Dr. Milford E. Barnes, Iowa City, Public Health Role of the Laundry.
Dr. Henry H. Kessler, Newark, N. J., National Program for the Civilian Amputee.
Dr. E. Payne Palmer, Phoenix, Cancer Problems of Today.
Dr. Felix Cunha, San Francisco, The Diagnosis and Treatment of Pancreatic Disease.
Dr. Lester Dale Huffman, Hollywood, Atherosclerosis of the Coronary Artery.

CALIFORNIA

Institute on Alcoholism.—A five day Institute on Alcoholic Studies opened in the Los Angeles campus of the University of California, August 19, under the auspices of the university's extension division. The institute is similar to the institutes conducted at Yale University (THE JOURNAL, June 12, 1943, p. 454).

California Medicine.—With the July issue the official journal of the California Medical Association took on a new name, *California Medicine*. Formerly known as *California and Western Medicine*, the publication has completely altered its appearance, format and arrangement of text material as well as added several new sections. Dr. Dwight L. Wilbur, San Francisco, is the editor.

State Society Launches Cancer Program.—The cancer commission of the California Medical Association is working in conjunction with the California division of the American Cancer Society in order to bring up to date information on cancer to all persons, both lay and professional. According to the *Bulletin* of the San Francisco County Medical Society the program of the commission involves the creation of cancer information centers, cancer detection centers, cancer consultation clinics and, in the distant future, cancer hospitals.

Merger of Health Departments Proposed.—The consolidation of the city and county health departments of Los Angeles was recommended by Dr. Hubert O. Swartout when he resigned June 30 as health officer of Los Angeles County (THE JOURNAL, June 8, p. 542). Dr. George M. Uhl, city health officer, was recommended to head the unified department. The project is under consideration by the county board of supervisors. Included among those considered for the position of county health officer, if the setup remains the same, are Drs. Harold D. Chope, assistant health officer of the San Joaquin District; Norman B. Nelson, instructor in medicine, University of Southern California School of Medicine, Los Angeles; Hamlet C. Pulley, chief assistant city health officer, and Ira O. Church, health officer of Santa Barbara County.

Trust Fund for Research.—A trust fund of $84,500 for use in research by the staff of 500 physicians who donate time to treating patients in the Los Angeles County General Hospital is, in effect, being set up by the physicians themselves, according to *California Medicine*. With the approval of the county board of supervisors, money for the fund is coming from billings by the hospital to patients in the "able to pay" class who have been treated there because other hospitals in the vicinity were too crowded to accommodate them. More than $35,000 has been collected already, and additional funds to bring the total to $84,500 are expected during the next fiscal year. Proposed research projects to be paid for by the fund will be submitted to the staff medical advisory board. The staff will not be restricted in its choice of fields for research.

COLORADO

State Medical Meeting.—The seventy-sixth session of the Colorado State Medical Society will be held at the Stanley Hotel, Estes Park, September 11-14, under the presidency of Dr. George A. Unfug, Pueblo. Among the speakers on the program will be:

Dr. Ludwig A. Emge, San Francisco, Critical Aspects of Ovarian Tumors.
Dr. Edward J. McCormick, Toledo, Ohio, Pertinent Facts on Medical Economics.
Dr. Lester R. Dragstedt, Chicago, Pathogenesis and Surgical Treatment of Chronic Ulcerative Colitis.
Dr. William Dock, Brooklyn, Newer Developments in the Pathogenesis and Treatment of Hypertension.
Dr. Norton Canfield, New Haven, Conn., Rehabilitation of Deafened.
Dr. Bert I. Beverley, Oak Park, Ill., Mental Growth, Its Stimulation and Stunting.
General Paul R. Hawley, Washington, D. C., Medical Care of the Veteran.
Dr. Clough T. Burnett, Denver, Precordial Electrocardiograms: The Importance of Accurate Location of the Cardiac Apex.
Dr. George B. Kent, Denver, Technical Pitfalls in Surgery of the Colon.
Dr. Carl W. Maynard, Pueblo, The Cell—1946.
Dr. Frederick R. Harper, Denver, The Surgical Treatment of Bronchiectasis.
Dr. Lewis J. Moorman, Oklahoma City, The Place of the General Practitioner in Present Day Medicine.

Features of the meeting will include symposiums on preoperative and postoperative care of surgical patients, blood diseases, antibiotics and unusual war experiences in the medical corps of the army and navy. On September 13 there will be a refresher course in surgery with Dr. William Yegge, Denver, presiding, and also one on September 14 in obstetrics and gynecology with Dr. Robert S. Liggert, Denver, presiding. Both courses are open only to those physicians who have registered in advance for the courses. The annual banquet at the Stanley Hotel, September 14, will be addressed by Dr. Lowell S. Goin, Los Angeles.

DISTRICT OF COLUMBIA

Rheumatism Society Organized.—The District of Columbia Rheumatism Society was organized at a meeting, June 4. The officers are Dr. Darrell C. Crain president, Dr. Charles H. McEnerney vice president and Dr. Milton C. Cobey secretary-treasurer.

GEORGIA

New Dean at Emory University.—Dr. Richard Hugh Wood, associate professor of clinical medicine, Emory University School of Medicine, Atlanta, and physician in chief of the Emory University Hospital, Atlanta, has been appointed dean of the medical school, it was announced August 8. He succeeds Dr. Eugene A. Stead Jr., who resigned to join the faculty of Duke University School of Medicine, Durham, N. C. Dr. Wood, who graduated at the Medical College of Virginia, Richmond, in 1921, has been associated with Emory since 1924.

INDIANA

Personal.—The Indianapolis Medical Society sponsored a gathering June 4 to honor Dr. Walter F. Kelly on the occasion of his retirement after nearly forty years of practice in Irvington. He was presented with a traveling bag and a diamond studded past commander's pin from the Paul Coble American Legion Post.——Dr. William D. Schwartz, Portland, recently completed fifty years of practice.

University News.—Dr. George T. Garceau has been promoted to professor of orthopedic surgery at the Indiana University Medical School, Indianapolis. Other promotions include Harold R. Hulpieu, Ph.D., to professor of pharmacology, Dr. Cecil P. Clark to clinical professor of ophthalmology, Donald E. Bowman, Ph.D., to associate professor of biochemistry and William H. Headlee, Ph.D., to associate professor of parasitic diseases.

Changes in Health Personnel. — Dr. Carl C. Kuehn, Indianapolis, has been named director of the division of tuberculosis control of the Indiana State Board of Health, succeeding Dr. Holland Thompson, Indianapolis.——Dr. Robert C. Rogers has resigned as health officer of Bloomington.——Dr. Martha A. O'Malley, Waukon, Iowa, has been named director of the division of hospital and institutional services of the Indiana State Board of Health.——Dr. Richard K. Schmitt, Columbus, has been named health officer of Columbus, succeeding the late Dr. Louie R. Crabtree.

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MASSACHUSETTS

Personal.—Dr. Thomas V. Urmy, Boston, has been appointed director of health at Williams College, Williamstown, succeeding Dr. Dana Farnsworth, Williamstown, who has accepted an appointment as director of the medical department at the Massachusetts Institute of Technology.

Fellowships at Boston Dispensary.—The Boston Dispensary offers two fellowships in medicine in its clinics and domiciliary medical service for appointments beginning September 1. These fellowships are approved by the American Board of Internal Medicine in satisfaction of graduate training. The salary is $1,800 a year, or $1,200 plus maintenance. Mr. Frank E. Wing is director.

Library Fund Named for Frederick Pratt.—A fund has been set aside at Boston University School of Medicine for use of the school library and designated the Frederick H. Pratt Fund. The sum, started by sale of a collection of medical periodicals collected through the years by Dr. Pratt, was donated to the library for its disposal. This was done in the case of duplicates held by the library, and the money was used for improvement and extension of the library. Dr. Pratt, who graduated at Harvard Medical School in 1906, served as professor of physiology at Boston University School of Medicine from 1921 to 1942, when he became emeritus.

MICHIGAN

Physicians Honored.—"Doctor's Day" was observed during a recent Rogers City homecoming, the event being held to honor particularly Drs. Neil C. Monroe, W. R. Arscott, Basil G. W. Larke and Samuel H. Rutledge, all of Rogers City. All physicians have practiced many years in the community. The Lions Club sponsored the recent celebration.

Grant for Research.—The Smith, Kline and French Laboratories have made an additional grant of $2,500 to Dr. Amedeo S. Marrazzi, professor and head of the department of pharmacology and therapeutics, Wayne University College of Medicine, Detroit. The grant is for the continuation of studies by electrical methods of drugs acting on the autonomic and central nervous systems.

Personal.—Dr. David Kliger has resigned as medical coordinator in Detroit of the state crippled children's commission, newspapers report.——Dr. Clifford H. Keene, Wyandotte, has been appointed medical director of the Kaiser-Frazer Corporation and Graham-Paige Motors Corporation, and Dr. Wilbur E. Dolfin, Wayland, has been appointed plant physician. ——Dr. Gertrude D. C. O'Sullivan, Mason, recently celebrated fifty years in the practice of medicine.

MINNESOTA

Illegal Practitioners.—On June 12 Frank H. Gold, Minneapolis, was sentenced to a one year term in the Minneapolis Workhouse following his plea of guilty to an information charging him with the crime of practicing healing without a basic science certificate. The sentence was stayed and the defendant was placed on probation for one year on condition that he refrain from practicing healing in any manner and on the further condition that he be not employed in any capacity by any hospital. Gold, who was employed as an orderly in a Minneapolis hospital, was representing himself as a physician and surgeon.——On June 3 Arthur N. Alexander, St. Paul, was sentenced to a term of not less than two years or more than eight years of hard labor in the State Prison at Stillwater following his plea of guilty to an indictment by the grand jury in Ramsey County charging him with the crime of abortion. On the same day Joseph Schmolke, St. Paul, was sentenced to a term not to exceed four years in the Stillwater prison following his plea of guilty to the charge of abortion in the same case. Mary Rakestraw, Pontiac, Mich., forfeited bail in the sum of $250 when her case was called for trial in the District Court of St. Louis County at Duluth. The defendant was arrested for practicing healing without a basic science certificate after she had carried an advertisement in Duluth newspapers to "straighten cross eyes, usually with one office visit," and identified herself as the Mary Rakestraw League for Cross Eye Correction.

MISSOURI

Examining Board Transferred to Education Department.—Dr. Howard B. Goodrich, Hannibal, was elected president of a new six member state board of medical examiners at its first meeting in Jefferson City August 5. The board, formerly under the state department of health, has been transferred to the department of education under a new governmental setup. Other officers of the examining board include Drs. Edwin C. White, Kansas City, vice president, and Harry A. Klein, St. Louis, secretary-treasurer. Mr. John A. Hailey, Houston, is executive secretary. Newspapers report that the board is composed of three members from each of the major political parties.

NEBRASKA

Student Loan Fund.—A student loan fund was established at the University of Nebraska College of Medicine, Omaha, in honor of Miss Josephine Chamberlain, who for many years was superintendent of the dispensary. The fund has been established with the University of Nebraska Foundation. Loans will be available to both medical and nursing students of the college of medicine who are approved by the student loan committee.

NEW JERSEY

Research on Antibiotics.—Dr. Warfield Garson, assistant surgeon of the field study section of the tuberculosis control division of the U. S. Public Health Service, has been appointed associate research specialist in the department of microbiology at Rutgers University, New Brunswick. Dr. Garson will work with Selman A. Waksman, Ph.D., professor of the department, and the work will be directed toward the isolation of antibiotics particularly active against the tubercle bacillus. Dr. Garson graduated from the University of Southern California School of Medicine, Los Angeles, in 1944 and entered the regular corps of the U. S. Public Health Service in July 1945.

NEW YORK

Ninety-Five Years of Age.—Dr. Frederick N. Winans, Franklin, observed his ninety-fifth birthday, May 28. Dr. Winans is a life member of the Otsego County Medical Society. He graduated at Columbia University College of Physicians and Surgeons in 1874.

Medical School Symposium.—The University of Buffalo School of Medicine announces three symposiums during the week of September 25-October 2 as a highlight of the university centennial observance (THE JOURNAL, April 27, p. 1254). Body proteins will be covered September 25-27, cancer September 30-October 2 and heart disease September 30-October 2. Speakers from all over the country will participate.

Palsy Association Acquires Clinic.—A fourteen room house formerly known as the Thing Estate and recently owned by Leland D. Judd has been purchased by the Cerebral Palsy Association for use as a clinic and orthopedic center. The association has already established an office in the new headquarters and is setting up a workshop where specially skilled members will build such things as special stand-up tables, relaxation chairs, parallel bars and working apparatus for future orthopedic patients. The Cerebral Palsy Association was organized in December 1945 (THE JOURNAL, Dec. 22, 1945, p. 1216).

Obstetric Society Formed.—The Buffalo Obstetrical and Gynecological Society was formed at a meeting recently, with Dr. Francis C. Goldsborough president, Dr. Irving W. Potter vice president, Dr. Milton G. Potter secretary and Dr. William H. Burwig treasurer, all of Buffalo. These officers, with Drs. Clyde L. Randall and Edward G. Winkler, both of Buffalo, form the executive council. The society will launch monthly meetings in October to run until May, when they will be adjourned for the summer. The first scientific meeting will be given over to the study and discussion of infant mortality statistics for the year 1945 in Buffalo hospitals.

Super Cyclotron at Rochester.—A super cyclotron that will produce particles of more than 200,000,000 volts, five times the maximum energy of any cyclotron now operating, will be built at the University of Rochester under a large program over the next few years to be financed principally by the U. S. Navy Office of Research and Invention, for fundamental nuclear research. The cyclotron will be the property of the navy, but its construction and operation for basic research will be under direction of the physics department of the University of Rochester headed by George B. Collins, Ph.D., recently appointed to that position to succeed Lee A. DuBridge, Ph.D., who has been chosen as president of the California Institute of Technology. It will take eighteen months to two years to complete the cyclotron, which will be the second largest in the world and will be used to accelerate protons up to energies above 200,000,000 volts. The largest atom smasher is under construction at the University of California and uses deuterons instead of protons.

New York City

Arthur Wright Retires.—Dr. Arthur M. Wright, George David Stewart professor of surgery and chairman of the department at New York University College of Medicine, will retire August 31, concluding thirty-nine years' service to the school. Dr. Wright, who graduated at Cornell University Medical College in 1905, joined the faculty of New York University College of Medicine as assistant in surgery in 1907, becoming clinical professor in 1916, associate professor in 1920, George David Stewart professor in 1933 and chairman of the department in 1942.

Allen Whipple Joins Beirut University.—Dr. Allen O. Whipple, who will retire September 30 as Valentine Mott professor of surgery at Columbia University College of Physicians and Surgeons, and director, surgical service, Presbyterian Hospital, has accepted an appointment on the faculty of medicine of the American University of Beirut, Beirut, Lebanon. Dr. Whipple will advise on the development of the new medical center of the Beirut school. As a trustee of the university he has helped plan the new teaching hospital there. His retirement at Columbia concludes thirty-five years' service on the faculty and thirty-four years at Presbyterian Hospital.

Graduate Fortnight.—Tumors will be the theme of the nineteenth graduate fortnight of the New York Academy of Medicine, October 7-18. Among the speakers will be:

Dr. Cushman D. Haagensen, Recent Advances in Cancer Therapy.
Dr. John E. Scarff, Tumors of the Nervous System.
Dr. Shields Warren, Boston, Tumors of the Thyroid Gland.
Dr. George F. Cahill, Tumors of the Kidney, Ureter and Bladder.
Dr. Archie L. Dean, Carcinoma of the Prostate Gland.
Dr. Lloyd F. Craver, Tumors of the Lymphatic System and Leukemia.
Dr. Herbert C. Maier, Tumors of the Lung.
Dr. Arthur F. Stout, Tumors of the Stomach.
Dr. Richard W. TeLinde, Baltimore, Tumors of the Uterus.
Dr. Grantley W. Taylor, Boston, Tumors of the Mammary Gland.
Dr. Henry L. Jaffe, Pathologic Aspects of Tumors of the Skeletal System.
Dr. Alexander B. Gutman, Medical Aspects of Tumors of the Skeletal System.
Dr. Bradley L. Coley, Surgical Aspects of Tumors of the Skeletal System.
Dr. J. Benson Cannon, Tumors of the Skin.
Dr. Fred W. Stewart, Occupational and Posttraumatic Cancer.
Dr. Raymond L. Pfeiffer, Tumors of the Eye and Orbit.
Dr. Hayes Martin, Tumors of the Oral Cavity.
Dr. Maurice Lenz, Tumors of the Larynx and Pharynx.
Dr. Frank E. Adair, Prophylaxis of Cancer.
Dr. Elise D. S. L'Esperance, Early Diagnosis of Cancer.

Morning panel discussions will be devoted to tumors of the female generative organs, October 8; tumors of the gastrointestinal tract, October 11; tumors of the lymphatic system, October 15, and tumors of the male genitourinary organs, October 18. On October 7 Dr. Peyton Rous of the Rockefeller Institute for Medical Research will deliver the Ludwig Kast Lecture on "Recent Advances in Cancer Research," and on October 11 Dr. Thomas E. Jones, surgeon, Cleveland Clinic Foundation Hospital, Cleveland, the Carpenter Lecture on "Tumors of the Colon and Rectum."

PENNSYLVANIA

Philadelphia

Charles Brown New Dean at Hahnemann.—Dr. Charles L. Brown, professor of medicine, Temple University School of Medicine, head of the department of medicine at Temple University Hospital and chief of the division of medicine at Philadelphia General Hospital, has been appointed dean of Hahnemann Medical College and Hospital of Philadelphia, effective September 1. Dr. Brown graduated at the University of Oklahoma School of Medicine, Oklahoma City, in 1921. He is a past president of the Philadelphia County Medical Society and of the Washtenaw County (Mich.) Medical Society.

RHODE ISLAND

Ninety Years of Age.—Dr. Margaret S. Hardman, the oldest member of the Rhode Island Medical Society, observed her ninetieth birthday recently. Dr. Hardman graduated at the College of Physicians and Surgeons in 1905. She served for thirty-five years as examining physician for both the Providence and Pawtucket Y. W. C. A., examining physician for the Providence School Department for many years and physician to the Doyle Avenue Home.

SOUTH CAROLINA

Francis Johnson Retires.—Dr. Francis B. Johnson has resigned as professor of clinical pathology at the Medical College of the State of South Carolina, Charleston. Dr. Johnson, who graduated at the university in 1903, has been associated with the school since 1908, when he was named assistant in medicine, serving as professor of clinical pathology since 1918.

SOUTH DAKOTA

State Medical Election.—Dr. Henry R. Brown, Watertown, was chosen president-elect of the South Dakota State Medical Association at its sixty-fifth session in Aberdeen in June and Dr. Frank S. Howe, Deadwood, was inducted into the presidency. Dr. John L. Calene, Aberdeen, is vice president and Dr. Roland G. Mayer, Aberdeen, secretary-treasurer. The 1947 meeting will be held in Redfield.

VIRGINIA

Spring Graduate Course.—The twentieth annual spring graduate course in ophthalmology and otolaryngology will be held at the Gill Memorial Eye, Ear and Throat Hospital, Roanoke, April 7-12, 1947.

Summer Clinics.—On July 25 the Raiford Memorial Hospital conducted its fourth annual summer clinics. The program was devoted to gastrointestinal disorders, with the following speakers:

Dr. Oscar Swineford Jr., Charlottesville, Allergic Conditions as Related to the Gastrointestinal Tract.
Dr. Henry B. Mulholland, Charlottesville, Peptic Ulcer with Treatment and Differential Diagnosis.
Dr. Clifford E. Gryte, Franklin, Lesions of the Large Intestine.

"Applied Physiology and Advances in Medicine" was discussed by Drs. Harold Green and David Cayer, both of Winston-Salem, N. C., and Harvey B. Haag, Richmond, Va.

Changes in Health Personnel.—The Virginia Department of Health announces that Dr. George R. Carpenter, recently returned from duty in Austria, has been appointed director of the state bureau of cancer control. Prior to his military service Dr. Carpenter was health officer of Fairfax County. Dr. Samuel C. Ingraham II, Richmond, recently released from his duties with the tuberculosis division of the U. S. Public Health Service, was appointed, as of July 1, director of the tuberculosis outpatient service and crippled children bureau. Dr. Thomas F. McGough Jr., Pulaski, recently released from medical services with the army, has been appointed, as of July 10, health officer of the Peninsula Health District. Dr. Walter A. Plecker, Richmond, has resigned as registrar of vital statistics in the state department of health, effective June 30. Dr. Harry E. Jenkins, recently released from service in the navy, has been appointed, effective June 1, health officer of the Southside health district of the Virginia Department of Health. Other appointments include those of Dr. Charles G. Souder, previously with the navy and latterly with the American Red Cross, as health officer of the Loudoun County health district, effective July 16, and Dr. Samuel S. Shouse, formerly health officer of Page-Warren-Shenandoah health district and recently released from service in the navy, as health officer of the Charlotte County health district, effective June 5. Transfers in the Virginia Department of Health include those of Dr. John C. Neale Jr., assistant director of local health services from the Southeast district office at Norfolk to the central office in Richmond, effective June 1, and Dr. John G. McNiel, Bristol, health officer of the Southside district, to assistant director of local health services in charge of the Southeast district in Norfolk, effective June 1.

WASHINGTON

Faculty Appointments at New Medical School.—William F. Windle, Ph.D., is professor and executive officer of the department of anatomy at the newly organized University of Washington School of Medicine, Seattle. Other appointments in the department include Dr. John L. Worcester, Seattle, professor of anatomy; Dr. Howard B. Kellogg, Seattle, associate professor of anatomy; R. Frederick Becker, Ph.D., formerly of Chicago, assistant professor of anatomy, and N. B. Everett, Ph.D., assistant professor of anatomy. The interior of the anatomy building on the university campus has been remodeled and will temporarily house the departments of anatomy and pathology during the development stage of the new medical dental laboratories. The department of biochemistry will be under the direction of Earl R. Norris, Ph.D., professor of biochemistry, and Carl A. Kuether, Ph.D., senior instructor, Western Reserve University School of Medicine, Cleveland, has been appointed assistant professor. The department of bacteriology is being incorporated in a new department of microbiology, which will include the fields of bacteriology, immunology, virology, mycology and medical protozoology, under the direction of Dr. Charles A. Evans, associate professor of bacteriology and immunology, University of Minnesota Medical School, Minneapolis.

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WISCONSIN

Faculty Changes at Wisconsin.—Included among recent changes on the faculty at the University of Wisconsin Medical School, Madison, are the following:

Walter J. Meek, Ph.D., to associate dean.
Dr. Ralph E. Campbell to professor of obstetrics and gynecology.
Dr. Raymond C. Herrin, Morrison, to professor of physiology.
Dr. Lester W. Paul to professor of radiology.
Dr. Frederick J. Pohle to associate professor of medicine.
Dr. Helen A. Dickie to associate professor of clinical medicine.
Dr. Edgar S. Gordon to associate professor of medicine.
Frank L. Kozelka, Ph.D., to associate professor of toxicology.

On September 1 Dr. Sture A. M. Johnson, formerly of New York, will join the faculty as professor of dermatology and Dr. Carol M. Rice, formerly of Sweet Briar, Va., as associate professor of clinical medicine and assistant director of student health.

GENERAL

Pathologists Award Burdick Medal.—The American Society of Clinical Pathologists during its meeting in San Francisco, June 27-30, presented the Ward Burdick Medal jointly to Drs. Alexander S. Wiener, Brooklyn, and Philip Levine, Linden, N. J., for their work on the Rh factor. New officers of the society include Dr. Theodore J. Curphey, Hempstead, L. I., president-elect; Dr. Stanley P. Reimann, Philadelphia, president; Dr. Paul E. Michael, Oakland, Calif., vice president, and Dr. Alfred S. Giordano, South Bend, Ind., secretary-treasurer.

Prevalence of Poliomyelitis.—Reports of cases of poliomyelitis for the periods indicated have been received from the division of public health methods, U. S. Public Health Service, as follows:

Division and State	Aug. 10, 1946	Aug. 11, 1945	Median, 1941-45	Total to Aug. 10, 1946	Total to Aug. 11, 1945
New England States:					
Maine	2	12	0	7	33
New Hampshire	8	0	0	47	10
Vermont	0	2	2	10	16
Massachusetts	9	28	4	33	90
Rhode Island	3	0	0	3	1
Connecticut	1	11	10	30	56
Middle Atlantic States:					
New York	70	111	30	293	569
New Jersey	18	71	21	72	280
Pennsylvania	12	45	17	74	131
East North Central States:					
Ohio	25	14	14	180	105
Indiana	21	12	12	69	44
Illinois	131	73	27	458	140
Michigan	74	8	8	167	38
Wisconsin	31	6	2	103	18
West North Central States:					
Minnesota	360	2	7	983	12
Iowa	48	6	5	171	22
Missouri	80	5	4	278	38
North Dakota	24	0	1	73	6
South Dakota	70	0	0	117	1
Nebraska	47	13	4	156	17
Kansas	74	3	3	280	32
South Atlantic States:					
Delaware	1	3	0	5	10
Maryland	2	4	4	21	38
District of Columbia	0	13	2	4	41
Virginia	5	27	3	40	136
West Virginia	3	0	2	23	19
North Carolina	0	7	7	49	54
South Carolina	1	13	6	17	101
Georgia	9	8	5	83	60
Florida	9	3	2	408	42
East South Central States:					
Kentucky	8	0	6	51	24
Tennessee	17	24	12	56	168
Alabama	44	8	6	244	97
Mississippi	22	3	3	126	28
West South Central States:					
Arkansas	19	2	3	141	21
Louisiana	17	2	2	186	32
Oklahoma	40	18	3	171	87
Texas	34	56	7	581	553
Mountain States:					
Montana	6	1	1	48	6
Idaho	0	0	0	6	2
Wyoming	18	0	0	38	3
Colorado	53	7	2	342	24
New Mexico	10	2	0	54	8
Arizona	5	0	2	43	5
Utah	7	18	2	27	65
Nevada	2	1	0	3	1
Pacific States:					
Washington	17	17	3	106	77
Oregon	10	2	2	35	11
California	115	40	11	526	242
Total	1,582	701	545		
32 weeks			3,311	7,038	3,614

Special Society Elections.—Recently elected officers of the Association of Schools of Public Health include Dr. Harry S. Mustard, New York, president; Dr. James S. Simmons, Boston, vice president, and Dr. Gaylord W. Anderson, Minneapolis, secretary-treasurer.——At the meeting of the American College of Chest Physicians in San Francisco, June 27-30, Major Gen. Shelley U. Marietta, Washington, D. C., was chosen president-elect, and Dr. Charles M. Hendricks, El Paso, Texas, was installed as president. Other officers include Drs. Richard H. Overholt, Boston, and Louis Mark, Columbus, Ohio, vice presidents, and Dr. Minas Joannides, Chicago, secretary-treasurer. The 1947 meeting of the college will be held in Atlantic City.——At the 1946 session of the American Urological Association Dr. Ernest G. Crabtree, Boston, was chosen president-elect, and Dr. Alfred I. Folsom, Dallas, Texas, was installed as president. Other officers include Dr. Thomas D. Moore, Memphis, Tenn., secretary, and Dr. Herbert H. Howard, Boston, treasurer.

Meeting of Psychologists.—The American Psychological Association will hold its fifty-fourth meeting at the University of Pennsylvania, September 3-7, with a program devoted to consideration of virtually every phase of contemporary psychologic research. In addition, special exercises, September 3, will mark the fiftieth anniversary of the first psychologic clinic in the world. This was founded at the University of Pennsylvania in 1896 by Lightner Witmer, Ph.D., Devon, Pa., who now is emeritus professor of psychology at Pennsylvania. Speakers at the anniversary ceremonies will be Laurance F. Shaffer, Ph.D., chairman of the department of guidance of Teachers College, Columbia University, New York; Edgar A. Doll, Ph.D., director of research at the training school, Vineland, N. J., and Major Gen. Paul R. Hawley, chief medical director, Veterans Administration, Washington, D. C. Although the American Psychological Association held a number of business sessions during World War II, the meeting in Philadelphia will be the first full meeting of the organization since 1941. Henry E. Garrett, Ph.D., chairman of the department of psychology at Columbia University, New York, is president of the association.

FOREIGN

Greek Physicians Need Clothing.—Dr. Chr. Christides, president of the Medical Society of Serres, Macedonia, Greece, in a letter describing the deplorable treatment by the Bulgarians of Greek physicians, has appealed for clothing for these physicians. Dr. Christides discusses the invasions by the Bulgarians in 1912, in 1916 and in 1941, pointing out that in the last one the Bulgarians did not allow any doctors coming back from the front to establish themselves in Bulgarian occupied Macedonia and confiscated all their property, instruments and belongings. Physicians who were away when the Bulgarians arrived were either killed or exiled from what they called the Bulgarian Domain, while their belongings were also confiscated and given to the Bulgarian doctors. While the doctors are working hard to overcome the results of the third invasion in thirty years, they can hardly make a living. Clothing seems to be available only in the black market at prohibitive prices and the UNRRA issues are given preferably to the working classes. Dr. Christides, in his appeal, says that clothing necessities for the eighty-five physicians of the Medical Society of Serres, Macedonia, would be greatly appreciated. He points out that, while the terms of the Armistice provide for the return of all stolen property to Greece, this was never done.

CORRECTION

Glycosuria and Diabetes in Selectees.—In the article by Dr. Harry Blotner in THE JOURNAL August 3 the caption "Blood Sugar Two Hours After Glucose Ingestion" should appear in table 1, page 1110, above the columns that follow the column of "Maximum Blood Sugar After Glucose Ingestion."

Government Services

Publication of Research in Medical Science Delayed

Unforeseen circumstances have interrupted the plan of the National Institute of Health, U. S. Public Health Service, Bethesda, Md., to publish a new journal, *Research in Medical Science*. While publication has had to be abandoned for the present, it is hoped that the National Institute of Health will be able to carry out the original plan at a later date (THE JOURNAL, July 6, p. 851).

Deaths

Theron Wendell Kilmer ✦ Hempstead, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1895; born in Chicago March 7, 1872; formerly adjunct professor of pediatrics at the New York Polyclinic Medical School and Hospital; member of the New York Academy of Medicine, Society of Medical Jurisprudence and the Association of Military Surgeons of the United States; in 1900 founded the Riverside Practitioners Society, in which he was active up until the time of his death; in 1926 was made an honorary member of the Nassau County (N. Y.) Police Department for his zeal in the promotion of police work; in 1928 appointed police surgeon of the Hempstead (N. Y.) Police Department, a position which became honorary in 1942; other police affiliations included membership in the National Association of Police and Fire Surgeons, International Association of Chiefs of Police and the New York State Association of Chiefs of Police; as an instructor on first aid and accidents, served for five years in the New York City Police Department and also in the New York City Fire Department; for eight years held the position of surgeon with the grade of major in the old 22d regiment, New York National Guard, now the 102d Engineers; during World War I a member of the Selective Draft Exemption Board number 116 in New York City; for twenty-two years a lecturer in the department of education in New York City; once a school inspector of the New York Health Department; served on the staffs of St. Vincent's Hospital, Vanderbilt Clinic, Babies Hospital, Polyclinic Hospital, Roosevelt Hospital and St. Bartholomews Clinic, all located in New York; devised a system known as the "Kilmer test" for determining whether a driver was intoxicated; author of "Practical Care of the Baby" and "Physical Examination of Infants and Young Children"; died in the Mercy Hospital, Rockville Centre, July 31, aged 74.

Anders Frick ✦ Chicago; Karolinska Mediko-Kirurgiska Institutet, Stockholm, Sweden, 1896; born in Malmoe, Sweden, Jan. 12, 1868; formerly assistant professor of clinical medicine at the University of Illinois College of Medicine; associate professor of medical therapeutics at the Rush Medical College from 1901 to 1905; emeritus member of the Illinois State Medical Society; fellow of the American College of Physicians; was made Knight of the Swedish Royal Order of the North Star by King Gustaf of Sweden for service among his countrymen for the alleviation of suffering and for their general welfare; chairman of the medical advisory board number 3B during World War I; in 1913 attending physician at the Cook County Hospital; in 1903 appointed attending physician at the Augustana Hospital, where he was chief of staff from 1925 to 1938 and where he died May 9, aged 78, of Parkinson's disease.

Ellis Robert Bader ✦ Cincinnati; Ohio-Miami Medical College of the University of Cincinnati, 1913; assistant professor of radiology at his alma mater, now known as the University of Cincinnati College of Medicine; specialist certified by the American Board of Radiology, Inc.; member of the American Roentgen Ray Society, of which he was first vice president, Radiological Society of North America, Inc., and fellow of the American College of Radiology; served during World War I; on the staffs of the Bethesda Hospital, Deaconess Hospital, Children's Hospital and the Christ Hospital, where he died June 16, aged 58, of cerebral thrombosis and myelogenous leukemia.

Charles Edgar Albright, Milwaukee; Rush Medical College, Chicago, 1889; died June 14, aged 79, of arteriosclerosis.

Thomas Herbert Ayer ✦ Westboro, Mass.; Medical School of Maine, Portland, 1892; for many years physician for the State School for Boys; died May 16, aged 80, of coronary disease.

Theodore T. Bauer, Seattle; University of Vienna Medical School, Austria, 1911; formerly associate professor of pathology and histology at his alma mater; served as pathologist to the Northern State Hospital in Sedro Woolley and the Roosevelt Memorial Hospital in Bremerton; died May 11, aged 61, of heart disease.

Auryne Elliott Bell, Louisville, Ky.; University of Louisville School of Medicine, 1929; member of the American Medical Association; member of the staff of the Norton Memorial Infirmary, Children's Free Hospital, Kosair Crippled Children Hospital, Jewish Hospital, Louisville General Hospital and the Kentucky Baptist Hospital, where he died May 27, aged 47, of uremia.

James Thomas Blakely ✦ Fairfield, Ill.; Barnes Medical College, St. Louis, 1906; veteran of the Spanish-American War; secretary of the Wayne County Medical Society; died in the De Paul Hospital, St. Louis, June 9, aged 72.

William Conrad Bode, Baltimore; Southern Homeopathic Medical College, Baltimore, 1904; served as a member of the state board of homeopathic medical examiners and on the staff of the West Baltimore General Hospital; died April 7, aged 77, of carcinoma.

William Cowan Bowen, Belton, S. C.; University of Maryland School of Medicine, Baltimore, 1892; member of the American Medical Association and honorary member of the South Carolina Medical Association; died in the Anderson County Hospital, Anderson, S. C., May 24, aged 76, of carcinoma of the throat.

Harvey Meares Brinkley ✦ Durham, N. C.; Jefferson Medical College of Philadelphia, 1919; on the staff of the Watts Hospital, where he died June 15, aged 49, of metastatic tumor.

William Francis Brokaw, Cleveland Heights, Ohio; University of Wooster Medical Department, Cleveland, 1890; died in the Lakeside Hospital, Cleveland, June 17, aged 85, of heart disease.

Henry Brooks, Pineville, Ky.; University of Georgia Medical Department, Augusta, 1897; member of the American Medical Association; died June 5, aged 66, of heart disease.

Archibald Brown, Rochester, Ind.; the Hahnemann Medical College and Hospital, Chicago, 1903; died April 3, aged 69, of hypostatic pneumonia and cerebral hemorrhage.

Sebastian Alfred Carnazzo ✦ Monterey, Calif.; Creighton University School of Medicine, Omaha, 1931; affiliated with the Peninsula Community Hospital, Carmel, and the Monterey Hospital, where he died May 10, aged 38, of cerebral hemorrhage.

Samuel Wolgamott Coffman, Maywood, Ill.; Chicago Physio-Medical College, 1896; Harvey Medical College, Chicago, 1898; served during World War I; died in the Vaughn General Hospital, Hines, May 26, aged 70, of cerebral thrombosis and hypertensive heart disease.

Robert T. Coleman, Young Harris, Ga.; Chattanooga (Tenn.) Medical College, 1902; formerly member of the state legislature in North Carolina; died May 16, aged 74, of cerebral hemorrhage.

Grove P. M. Curry, Mount Kisco, N. Y.; University of the City of New York Medical Department, New York, 1892; member of the American Medical Association; served as health officer and registrar in Mount Kisco for many years; died May 13, aged 80, of cerebral hemorrhage.

Bruno Daniel, New York; Schlesische-Friedrich-Wilhelms-Universität Medizinische Fakultät, Breslau, Prussia, Germany, 1923; member of the American Medical Association; served a residency at the Rockland State Hospital in Orangeburg, N. Y.; senior resident psychiatrist at the Manhattan State Hospital, where he died May 21, aged 47.

James Franklin Douglas, Washington, D. C.; Columbian University Medical Department, Washington, 1892; member of the American Medical Association; died in the Emergency Hospital May 21, aged 81, of bronchopneumonia.

Edvige N. Dragonetti, Newark, N. J.; Woman's Medical College of Pennsylvania, Philadelphia, 1914; member of the American Medical Association; until recently a member of the staff of the Babies Hospital; died May 22, aged 55, of carcinoma of the lung and breast.

Richard Edwin Dunne ✦ Hartford, Conn.; Harvard Medical School, Boston, 1919; specialist certified by the American Board of Surgery; member of the New England Surgical Society; president-elect of the Hartford County Medical Society; fellow of the American College of Surgeons; served during World War I; on the staff of the McCook General Hospital; president of the staff and chairman of the executive committee of St. Francis Hospital, where he died May 28, aged 51, of ruptured aneurysm of the abdominal aorta.

Benjamin George Dyer, Kalamazoo, Mich.; Drake University Medical Department, San Francisco, 1900; member of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology; specialist certified by the American Board of Otolaryngology; fellow of the American College of Surgeons; formerly on the staff of the Atchison, Topeka and Santa Fe Railway Hospital in Topeka; died in the Borgess Hospital, May 15, aged 80, of angina pectoris.

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Thomas Bascon Ely, Jonesville, Va.; Medical College of Virginia, Richmond, 1912; member of the American Medical Association; examiner for the draft boards during World Wars I and II; served as a member of the state legislature; local surgeon for the Louisville and Nashville Railroad; died May 6, aged 62, of heart disease.

Edward Redding Emens, Decatur, Ala.; Vanderbilt University School of Medicine, Nashville, 1927; member of the American Medical Association; died May 10, aged 45, of heart disease.

Charles Francis Engels, Tacoma, Wash.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1896; member of the American Medical Association; died April 28, aged 73, of carcinoma of the prostate.

Frank Edward Eusten, Syracuse, N. Y.; Syracuse University College of Medicine, 1905; member of the American Medical Association; on the surgical staff of the Crouse-Irving Hospital; died May 3, aged 65, of coronary occlusion.

John W. Evans, Brownsville, Tenn.; Meharry Medical College, Nashville, 1902; died May 9, aged 68, of hypertrophy of the prostate, chronic nephritis and uremia.

Miner Harlow Amos Evans, Boston; Harvard Medical School, Boston, 1902; also a law school graduate; specialist certified by the American Board of Psychiatry and Neurology, Inc.; member of the American Medical Association, American Psychiatric Association and the New England Society of Psychiatry; consulting physician to the Quincy (Mass.) City Hospital and the Boston City Hospital; died in Wellesley Hills, Mass, May 5, aged 65, of carcinoma of the lung.

Herman Fischer, Los Angeles; Rush Medical College, Chicago, 1903; served on the staffs of the city and county health departments and as chief medical examiner of the Chicago, Burlington and Quincy Railroad Company; died April 13, aged 74.

Herbert Herman Forcheimer ✠ Mobile, Ala.; University of Pennsylvania Department of Medicine, Philadelphia, 1909; served during World War I; lieutenant colonel, medical reserve corps, U. S. Army, not on active duty; died in the Providence Hospital May 2, aged 59, of coronary thrombosis.

Benjamin Bennett Foster ✠ Portland, Maine; College of Physicians and Surgeons, Boston, 1906; member of the American Academy of Dermatology and Syphilology and the New England Dermatological Society; fellow of the American College of Physicians; died May 8, aged 64, of cerebral hemorrhage.

Charles Reuben Fulmer, Philadelphia; Hahnemann Medical College and Hospital, Philadelphia, 1889; served on the staff of the Hahnemann Hospital; died May 13, aged 77, of cerebral hemorrhage.

Emmett A. Garrett, Peoria, Ill.; College of Physicians and Surgeons, School of Medicine of the University of Illinois, 1902; member of the American Medical Association; served as president of the Peoria City Medical Society, city health commissioner and president of the Methodist Hospital staff; a medical officer overseas during World War I; died May 24, aged 66, of arteriosclerotic heart disease.

Stanley D. Giffen, Toledo, Ohio; Columbia University College of Physicians and Surgeons, New York, 1902; specialist certified by the American Board of Pediatrics; member of the American Academy of Pediatrics; served during World War I and on the staffs of the Women's and Children's, Lucas County General and the Toledo hospitals; died May 5, aged 72, of arteriosclerosis.

Spencer Glas Gill ✠ Norfolk, Va.; Jefferson Medical College of Philadelphia, 1914; affiliated with the De Paul Hospital; died in the Leigh Memorial Hospital May 17, aged 58, of coronary thrombosis.

Edwin Clair Granger, Edmeston, N. Y.; Syracuse University College of Medicine, 1918; served during World War I and as health officer and county coroner; died May 12, aged 53, of carcinoma of the larynx.

Charles Francis Harris ✠ Klamath Falls, Ore.; Rush Medical College, Chicago, 1914; served during World War I; died April 6, aged 58.

Charles Henry Helfrich, Passaic, N. J.; New York Homeopathic Medical College, 1884; fellow of the American College of Surgeons; died in the Passaic General Hospital May 31, aged 82, of carcinoma of the prostate and bladder.

David Alderman Herron ✠ Iowa Falls, Iowa; Indiana Medical College, School of Medicine of Purdue University, Indianapolis, 1907; died in the Ellsworth Municipal Hospital May 23, aged 62, of coronary thrombosis.

Edward Raymond Hildreth ✠ Bay Shore, N. Y.; Cornell University Medical College, New York, 1902; fellow of the American College of Surgeons; consulting surgeon, Eastern Long Island Hospital, Greenport, Mather Memorial Hospital, Port Jefferson, New York State Hospital, Central Islip, Pilgrim State Hospital, Brentwood and the South Side Hospital; medical director of the Presbyterian Hospital in San Juan, P. R., from 1906 to 1921; died May 27, aged 69, of cerebral hemorrhage.

Sylvester V. G. Hoopman, Douglas, Ariz.; College of Physicians and Surgeons, Baltimore, 1882; member of the American Medical Association and the Washington State Medical Association; died April 23, aged 87, of arteriosclerotic heart disease.

Kate Kelsey-Clark, Cable, Wis.; Homeopathic Hospital College, Cleveland, 1883; died in the General Hospital, Ashland, April 16, aged 89, of influenza.

Howard Mitchell Kendig ✠ Sikeston, Mo.; Northwestern University Medical School, Chicago, 1924; past president of the Scott County Medical Society; died March 29, aged 48, of coronary occlusion and chronic thrombosis of veins in left leg.

Alvis Young Kirby, Lafayette, Tenn.; University of Tennessee Medical Department, Nashville, 1905; chairman of the local draft board and chairman and member of the board of education; died in Chattanooga May 20, aged 72, of heart disease.

Ray Calvin Klopp, Reading, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1913; died in the Homeopathic Hospital May 15, aged 58, of uremia.

Frederick Peter Knauf ✠ Kiel, Wis.; College of Physicians and Surgeons, School of Medicine of the University of Illinois, 1900; served as health officer; died May 15, aged 69, of coronary thrombosis.

Wendell Deardorff Little, Indianapolis; Indiana University School of Medicine, Indianapolis, 1918; member of the American Medical Association; fellow of the American College of Surgeons; served as assistant professor of surgery at his alma mater; member of the visiting staff of the Robert W. Long and Indianapolis City hospitals, James Whitcomb Riley Hospital for Children and the William H. Coleman Hospital for Women; died May 24, aged 53, of coronary occlusion.

William Littlejohn, Bridgman, Mich.; Kansas Medical College, Medical Department of Washburn College, Topeka, 1899; died May 6, aged 80, of carcinoma of the stomach.

John Shirly Lowry, Smyrna, Tenn.; University of Nashville Medical Department, 1899; on the staff of the Rutherford Hospital, Murfreesboro; died May 20, aged 72, of angina pectoris.

John Alexander McCaw ✠ Denver; Rush Medical College, Chicago, 1901; an Affiliate Fellow of the American Medical Association; member of the American Academy of Ophthalmology and Otolaryngology; died March 28, aged 79.

Roman H. Maior, Hamtramck, Mich.; Detroit College of Medicine and Surgery, 1921; member of the American Medical Association; died in St. Francis Hospital May 19, aged 50, of ruptured aneurysm and hypertension.

John Frank Marrs, Tompkinsville, Ky.; Hospital College of Medicine, Louisville, 1905; served overseas during World War I; chairman of the county board of education; died May 7, aged 65, of heart disease.

Milton Loveland Marsh, New Britain, Conn.; Eclectic Medical Institute, Cincinnati, 1894; medical examiner for the draft board during World War I; served as consultant on the staff of the New Britain General Hospital; died in the Masonic Home, Wallingford, May 7, aged 76, of cerebral arteriosclerosis.

George Earl Martin, Williamsburg, Ind.; Louisville (Ky.) Medical College, 1903; veteran of the Spanish-American War; died May 16, aged 70, of coronary occlusion.

John S. Massey, Monroe, N. C.; Leonard Medical School, Raleigh, 1896; died May 12, aged 80, of chronic nephritis and uremia.

Joseph Allen Meek, St. Petersburg, Fla.; Rush Medical College, Chicago, 1883; Civil War veteran; died May 6, aged 102, of senility.

Tyler Meriweather ✠ Decatur, Ill.; Jefferson Medical College of Philadelphia, 1899; served on the staff of St. Mary's Hospital and as chief surgeon for the Illinois Central Railroad; died May 24, aged 70, of diabetes mellitus.

J. H. Merritt, Ten Mile, Tenn.; Southern Medical College, Atlanta, 1895; died May 17, aged 86.

John Mohr, Cleveland; Western Reserve University Medical Department, Cleveland, 1902; died in Mentor May 7, aged 74, of bronchopneumonia.

Silas Mercer Moorman ✠ New York; Cornell University Medical College, New York, 1908; died in St. Luke's Hospital April 27, aged 67, of coronary disease.

Henry William Morgenroth, Los Angeles; Milwaukee Medical College, 1897; one of the founders of the Mercy Hospital in Oshkosh, Wis.; died April 19, aged 75, of cerebral hemorrhage.

Milo Willis Moulton ✠ Bellevue, Iowa; State University of Iowa College of Medicine, Iowa City, 1898; died April 21, aged 72, of multiple sclerosis.

William D. Murphy, Columbus, Ohio; Ohio Medical University, Columbus, 1896; member of the American Medical Association; affiliated with the White Cross, Children's and Grant hospitals; died May 12, aged 75, of myocardial insufficiency.

James Ward Price, Marlinton, W. Va.; Baltimore Medical College, 1891; at one time member of the state legislature; served as president of the Bank of Marlinton; died May 7, aged 77, of senility.

Lewis Jay Rosenthal ✠ Baltimore, College of Physicians and Surgeons, Baltimore, 1901; formerly associate professor of the practice of medicine at the University of Maryland School of Medicine and College of Physicians and Surgeons; fellow of the American College of Surgeons; served during World War I; member of the staffs of the Church Home and Infirmary, Mercy Hospital and the Sinai Hospital, where he died May 9, aged 67, of coronary occlusion.

Harold Oliver Ruh ✠ Cleveland, Western Reserve University Medical Department, Cleveland, 1910; specialist certified by the American Board of Pediatrics, Inc.; member of the American Academy of Pediatrics and the Cleveland Academy of Medicine; major in the medical corps of the U. S. Army during World War I; fellow and at one time trustee of the Cleveland Medical Library Association; served on the staffs of the St. Luke's, Lakeside and Babies and Childrens hospitals; died May 18, aged 62, of coronary thrombosis.

Simon P. Scherer, Martinsville, Ind.; Central College of Physicians and Surgeons, Indianapolis, 1891; member of the American Medical Association; died May 3, aged 80, of coronary sclerosis.

Matthew Robert Slattery ✠ Bay City, Mich.; Detroit College of Medicine and Surgery, 1914; served during World War I; on the staffs of the Bay City General and Mercy hospitals; died May 8, aged 55, of coronary thrombosis.

Charles L. Smullen, Rushville, Ind.; Medical College of Indiana, Indianapolis, 1889; member of the American Medical Association; died May 14, aged 81, of amyotrophic lateral sclerosis.

Henry Clayton Ulery, Girard, Kan.; University Medical College of Kansas City, Mo., 1911; died April 25, aged 71, of coronary thrombosis.

Kenneth Buchanan Wallace, New Rochelle, N. Y.; New York Homoepathic Medical College and Flower Hospital, New York, 1916; member of the American Medical Association; served during World War I; on the staff of the Grasslands Hospital, Valhalla; for many years on the staff of the New Rochelle Hospital, where he died May 13, aged 56, of carcinoma of the lung.

John Gaillard Webb ✠ Mercedes, Texas; University of Texas School of Medicine, Galveston, 1913; councilor of the Sixth District of the State Medical Association of Texas; local Missouri Pacific Railroad physician; physician for the city high school football squad; died April 17, aged 66, of cancer of the colon.

Erwin P. Weber, Milwaukee; Milwaukee Medical College, 1909; died May 15, aged 58, of cerebral tumor and carcinoma.

V. W. Weir, McRae, Ark. (licensed in Arkansas in 1903); died in Little Rock, April 18, aged 89, of carcinoma of the prostate.

Harry Eugene Woods, Birmingham, Iowa; Rush Medical College, Chicago, 1883; local health officer; died in the Jefferson County Hospital, Fairfield, May 10, aged 89, of gangrene following pneumonia.

Murray Woronoff ✠ Keyport, N. J.; Tufts College Medical School, Boston, 1929; specialist certified by the American Board of Pediatrics; interned at the Monmouth Memorial Hospital in Long Branch; served during World War II; died in Boston June 23, aged 39.

DIED WHILE IN MILITARY SERVICE

George Franklin Cottle ✠ Medical Director, Captain, U. S. Navy, Long Beach, Calif.; born Aug. 22, 1879; Columbia University College of Physicians and Surgeons, New York, 1905; fellow of the American College of Surgeons; honorary member of the Los Angeles County Medical Association; entered the U. S. Navy in 1908 as a lieutenant (jg) commissioned a captain in 1931; took postgraduate work and courses in orthopedic surgery at the naval medical school; chief of surgery at the naval hospitals in Washington, D. C., Boston and Brooklyn; served as fleet surgeon aboard the U. S. S. *Pennsylvania* when the ship was stationed in Long Beach harbor in 1935; later served as medical observer for the U. S. Naval Attaché's Office at the United States Embassy in London; after serving as commanding officer of the U. S. Naval Dispensary retired for incapacity resulting from an incident of service; recalled to active duty at the U. S. Naval Training Unit at Occidental College in Los Angeles; chairman of the council of social agencies at Long Beach; died in the U. S. Naval Hospital Aug. 10, 1945, aged 65, of cerebral hemorrhage.

Sylvan Altshiller Hertz, New York; Washington University School of Medicine, St. Louis, 1941; diplomate of the National Board of Medical Examiners; interned at the Beth Israel Hospital; began active duty as a first lieutenant in the medical corps, Army of the United States, on Oct. 29, 1942; promoted to captain; died March 8, aged 29, while on terminal leave.

Byrlton Douglas Lohmiller, Madison, Wis.; University of Wisconsin Medical School, Madison, 1942; member of the American Medical Association; interned at the Madison General Hospital; began active duty as a first lieutenant in the medical corps, Army of the United States, in August 1943; promoted to captain; stationed at Keesler Field, Biloxi, Miss., where he accidentally drowned April 1, aged 31.

Talbot Austin Tumbleson ✠ Beaumont, Texas; Tulane University of Louisiana School of Medicine, New Orleans, 1924; member of the American Academy of Pediatrics; specialist certified by the American Board of Pediatrics; served as president of the Texas Pediatric Society; member of the National Tuberculosis Association and the Southern Medical Association; on the staffs of Hotel Dieu and St. Therese hospitals; for many years a member of the board of education; began active duty as a major in the medical corps, Army of the United States, on May 18, 1942; promoted to lieutenant colonel and colonel; attached to Patton's armies throughout the campaign in Europe; died March 14, aged 50, while on terminal leave.

Robert Albert Whiffen, San Jose, Calif.; Stanford University School of Medicine, San Francisco, 1941; member of the American Medical Association; interned at St. Mary's Hospital in San Francisco; served a residency at the Monterey County Hospital in Salinas; commissioned a lieutenant (jg) in the medical corps of the U. S. Naval Reserve on Sept. 11, 1943; promoted to lieutenant; killed in an automobile accident near Gilroy March 7, aged 31.

Alfred Stevenson White ✠ San Francisco; University of California Medical School, San Francisco, 1932; specialist certified by the American Board of Surgery; fellow of the American College of Surgeons; member of the National Gastroenterological Association; affiliated with the Mount Zion Hospital, where he served an internship; began active duty in the medical reserve corps of the U. S. Army on Nov. 1, 1940; promoted to lieutenant colonel in the medical corps, Army of the United States; died February 13, aged 37, of coronary occlusion while on terminal leave.

Joseph Clayton Wood, Nashville, Tenn.; Vanderbilt University School of Medicine, Nashville, 1935; interned at the Nashville General Hospital, Nashville, Tenn., where he served a residency; interned at St. Thomas Hospital in Nashville, Tenn.; began active duty in the medical corps, Army of the United States, on June 20, 1942 as a first lieutenant; promoted to captain; connected with the 135th General Hospital in England; served six months in the European theater of operations; died in Donelson May 9, aged 35, while on terminal leave.

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Foreign Letters

LONDON

(From Our Regular Correspondent)

July 20, 1946.

Memorials to Sir Thomas Lewis

Sir Thomas Lewis, who can be described as the founder of modern cardiology, died in 1945. His many friends, colleagues and pupils in Britain are invited to subscribe to a memorial fund to provide a portrait in oils and a lectureship. A memorial fund has already been subscribed by some forty American and Canadian pupils to provide a bronze plaque to be set up in the medical school of University College, London. It will bear the inscription "In this school, where he worked with unparalleled ardor and consummate skill to find the truth, may the spirit of Sir Thomas Lewis live forever! In recognition of their great debt to him, this plaque has been placed here by his pupils and friends from the United States and Canada." Colleagues and friends are being asked to contribute to the portrait, which will be hung in the medical school of University College. Funds for the endowment of a lectureship are being sought from a wider circle, which, it is hoped, will include not only those who were privileged to come into personal contact with him at the medical school and hospital and through the societies of which he was a member but also the many physicians who have been influenced by his teaching and devotion to the scientific method in clinical medicine, which he so strenuously advocated. It is hoped that sufficient will be raised to endow a short course of lectures to be given by those of the highest distinction in some sphere of scientific medicine. Subscriptions should be sent to the Lewis Memorial Fund, % the Secretary, University College Hospital Medical School, University Street, London, W. C. 1.

The Nationalization of Medicine in Australia

At a conference of health ministers of the Australian states Senator Fraser announced that the federal government had decided, in spite of opposition from the medical profession, to proceed with the establishment of a national medical service throughout Australia, which would be free to every Australian. If a forthcoming referendum proposing that the commonwealth should be empowered to establish a national service is carried, the procedure will be under direct commonwealth legislation. If the referendum fails, the commonwealth will ask the Australian states to carry out an agreed plan which it will subsidize. The scheme provides a full service in diagnosis and treatment, including specialist treatment. It will involve the establishment of a network of medical centers throughout Australia. Senator Fraser said that the government did not intend to compel doctors to serve under the scheme or to compel people to use it. Both would be free to make private arrangements as at present. Doctors would be given an opportunity to take part in the service, either full time or part time, on a salaried basis.

Predisposition to a Disease Is Not a Disease

At the Edinburgh Court of Sessions an important judgment was given by three judges on the efforts of the Ministry of Pensions to avoid liability for pensions by alleging that the claimant must have had a predisposition or inherent constitutional tendency to the disease. The court was considering 16 cases in which appeals had been made against the findings of the Pensions Appeal Board. Giving judgment, Lord Cooper said that the services must take a man as they found him. To say that he was predisposed to a certain disease meant only that if he was exposed to the conditions, known or unknown, the disease would find in his constitution congenial soil in which to develop. The court was unable to see the relevance of such a consideration. Unless the minister could prove beyond reasonable doubt that the service conditions played no part in producing the disease, pension must be awarded. Predisposition to a disease was not a disease.

In 3 of the cases the decision on whether the onus on the minister had been discharged beyond reasonable doubt was a majority decision of the Pensions Appeal Tribunal, the legal chairman intimating his dissent. Without affirming that it was incompetent for a tribunal to decide by a majority, it appeared to the court that when the question was the sufficiency of evidence to discharge such an onus, and when express injunction had been laid on the tribunal to give the claimant the benefit of any reasonable doubt, only powerful considerations could justify the medical and service members in outvoting the legal chairman.

The Food Situation

In order to help the countries threatened with famine, the food rationing of the war period continues, and further restrictions, such as bread rationing, have been introduced. The last is very unpopular and is denounced as unnecessary and unworkable. It certainly causes much inconvenience. Official figures given by the minister of food show that the average civilian diet is 2,800 to 2,850 calories per person daily, about 7 per cent less than the prewar average of 3,010 calories. The minister pointed out that this does not mean that each person is eating 7 per cent less than before the war; some are eating considerably less, others are eating considerably more than they could buy before the war. Rationing and price control have brought the worst fed and the best fed groups nearer to the national average. The rationing of the war was a success, as no cases were observed of deficiency disease or other ill effects, though much complaint was made of the monotony of the diet and it was alleged that in certain industries output was diminished because of lassitude resulting from the restricted diet; but this was not proved.

BELGIUM

(From Our Regular Correspondent)

July 19, 1946.

Armies of the Rhine: Interallied Medical Meeting

Recently the first interallied medical meeting of the forces of occupation took place at the Belgian Field Hospital. The Belgian army has set up a hospital east of the Rhine at a magnificent site with buildings and technical and hospital equipment which may compete successfully with the most modern establishments in Belgium.

There were present at this meeting Surgeon Major General Voncken, inspector general of health service of the Belgian army, Brigadier Generals Erscritt and Bado from the Royal British Army Corps, Surgeon Colonel Dufaulx, chief of health service of the French division of occupation, Surgeon Colonel Fontana, chief of health service of the Belgian division of occupation and many superior medical officers of the Belgian, British and French armies and the Belgian surgeons of the division of occupation. The medical delegates of the American forces of occupation were prevented at the last moment from attending this meeting. This gathering reminded one of the Franco-Belgian meeting of the war of 1914-1918.

These meetings are justified by the part they play in the realization of the common efforts expended by every one of the surgeons of the occupation armies in their respective zones and by the necessity to create on the spot centers of scientific research. In the course of the meeting Surgeon Lieutenant Van Den Berghe presented one case of pellagra with ocular symptoms. He gave an extensive report on differential diagnosis with regard to other disorders of similar symptomatology.

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This report was followed by an interesting discussion in which ophthalmologists, dermatologists and internists participated.

Surgeon Second Lieutenant Lakaye presented a study on the present conditions of the campaign against the venereal diseases in the army. As an example he described the successive stages of this campaign in a large city during the German occupation and after its liberation. He continued with the problem of modern therapy of syphilis and gonorrhea, considering sulfonamide and penicillin resistances and pointing out that it is still too early to appreciate the effectiveness of all the latest American methods for the treatment of syphilis.

The meeting adjourned after extensive exchange of views among those attending it. The next meeting will take place in a British field hospital.

Diagnostic Methods for Benzene Poisoning

At the Belgian Industrial Medical Association M. Lambin presented a report on methods for diagnosing benzene poisoning. This disorder occurs frequently and may have developed to considerable degree although the person affected may be unaware of it. It is important to study the history of the case and to observe the various symptoms with respect to the digestive tract and to the nervous system. Blood studies are to be considered the basis of the diagnosis. One must not expect the occurrence of the same syndrome of aplastic anemia in all the cases. All forms of changes of the blood may be observed in practice. The author reminds one of the various tests suggested in France, in America, in Great Britain and in Belgium; the most recent one is that called "the three 4": 4 millions of red corpuscles, 4 millions of white corpuscles and 4.5 per cent neutrophils. Extreme caution is required in interpreting hemograms. The results of Lambin's studies and of those of his students in Belgium as well as in other countries revealed that the blood formula to be considered normal does not correspond to what is actually found. Ferrière examined the blood of 150 students and obtained particularly interesting results: thus the average number of red corpuscles in men is 5,007,100 and in women it is 4,336,000; 6,484 is the average number of white corpuscles in men and 5,525 in women. With regard to the red corpuscles, a count of about 3,750,000 is to be considered pathologic in men and a count of 4,250,000 may raise suspicion. M. Lambin comments extensively on these counts and ends his report with a description of the main signs of destruction of the blood which should be carefully watched for.

Experimental Surgery in a German Camp

At the Belgian Surgical Association Dr. Cahen reported several instances of experimental surgery in a German camp by presenting the patients. For the purpose of studying bone repair two young Polish women were exposed to considerable removal of bone at the middle third of both fibulas. They were kept in plaster casts for six months, and surgical intervention then was repeated to remove the callus. The loss of substance was of such an extent that at present the proximal and distal fragments are at a distance of 10 cm. from each other and will remain so permanently. Seventy-four Polish women were operated on in this manner under the direction and responsibility of Professor Gebhardt, a well known Nazi. In the same camp several inmates were inoculated with tetanus, but there were no fatalities from this experiment since treatment was at once instituted. Yugoslavian women were exposed to considerable mutilation of bone up to the total removal of the scapula.

The third subject, a man aged 21, suffered a bilateral castration at a German hospital in the outskirts of Brussels; this was done within the frame of the mass sterilization plans concerning the "inferior races!"

These cases present more proof of German brutality.

MOSCOW

(From Our Regular Correspondent)

June 1, 1946.

Reestablishment of Public Health in the First Postwar Year

Prior to the war the territories that were subsequently occupied by the enemy contained 46.2 per cent of city hospitals, 45.4 per cent of rural hospitals, 48.5 per cent of urban dispensaries and 51.5 per cent of rural dispensaries. That is nearly one half of all the medical establishments of the country. The enemy destroyed 40,000 hospitals, dispensaries, polyclinics, kindergartens and welfare stations. The total loss amounted to 6,726,000,000 rubles. Reconstruction was begun immediately after the expulsion of the enemy. The total sum assigned for health work during the ten months following the day of victory amounted to 79,719,000 rubles. During this time there were restored 44,600 hospital beds, including 14,500 beds for obstetric cases. The kindergartens received 5,296 new units, and more than 40,000 units were added to the permanent nurseries. The cost of drugs, medical instruments and appliances received by the liberated regions during this period amounted to 400,000,000 rubles. Many new problems faced medical institutions. The war had a detrimental influence on the health of children of all ages. According to Dr. F. Zborovskaja, director of the Pediatric Institute of the Soviet Academy of Medical Sciences, the infants suffered chiefly in the occupied regions.

The fascist invaders spread venereal disease in the conquered territory. Soon after liberation the number of special hospitals for the treatment of venereal diseases was increased. The spread of venereal infection was arrested and it became possible to give adequate aid to the infected. The Soviet people suffered much during the fascist occupation from malnutrition, cold and slave conditions of work. This resulted in a sharp increase in tuberculosis. A special campaign against tuberculosis was initiated by the Soviet government as early as 1943. All possible measures for reconstruction and increase in the number of tuberculosis establishments were enacted, especially in the occupied regions. During the ten months following V day 5,000 beds were equipped for the treatment of tuberculous cases. Special sanatoriums for pulmonary and bone tuberculosis began to function in the Crimea. All young workers were examined roentgenologically twice during that year to screen out tuberculous cases.

The veterans are the object of particular care on the part of the Soviet government. Specialized hospitals were opened for their treatment, with a total of 60,000 beds. These hospitals are staffed with surgeons, orthopedists and other specialists. Special medical commissions in Moscow found that about 80 per cent of the veterans could be returned to productive labor. Twelve special institutions of traumatology and orthopedics were created for their treatment.

Pediatric Conference

The All-Union Society of Pediatricians will hold a sixth congress of children's diseases in Moscow in May 1947. The discussions will be devoted to three problems: (1) tuberculosis, rickets and similar diseases as affected by the war; (2) morbidity and mortality in the first year of life due to infectious diseases, in particular pneumonia; (3) acute infectious diseases such as diphtheria and measles. There will be a special graphic exhibit to illustrate the progress of pediatrics in the Soviet Union.

Conference of Urologists

The second conference of urologists was held in Leningrad recently with 160 specialists attending. Professor A. P. Frumkin described new plastic operations, such as transplantation of both testicles, after traumatic loss, from fresh cadavers with blood vessel anastomosis. Dr. G. I. Goldin described trans-

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plantation of cartilage as an operation of choice for straightening a traumatically bent penis. Professor A. P. Pytel read a paper on liver function in uroseptic disease. Infections of the genitourinary tract are treated with glucose, insulin, gelatin and preparations containing aminoacetic acid. Sulfonamides, antibiotics and blood transfusions may be used as indicated.

Epidemics in Poland

The Soviet Red Cross Society sent to Poland, on the invitation of the Polish Ministry of Health, medical groups for combating infectious diseases. Each group contains two physicians, an epidemiologist and a specialist in skin and venereal diseases, three assistant surgeons and three medical nurses. They are equipped with a disinfecting chamber, drugs and special appliances. The number of physicians in Poland is utterly inadequate.

The Soviet Ministry of Health, on the request of the Ethiopian government, organized in Addis Ababa a hospital and a dispensary in which Soviet doctors will give medical help to the rural population and to the population of adjacent territories. The hospital is completely equipped and staffed with surgeons, internists, specialists in nervous and mental diseases, in diseases of the eye, nose and throat and radiologists.

BRAZIL

(From Our Regular Correspondent)

SÃO PAULO, July 6, 1946.

Testosterone Propionate for Postoperative Cancer of the Breast

The relationship between endocrine mastopathy and mammary cancer, the influence of estrogens in the occurrence of this tumor and the biologic antagonism between androgens and estrogens justify the use of testosterone propionate in the prophylaxis of mammary cancer after operation, in the opinion of Dr. Antonio Prudente, professor of the Escola Paulista de Medicina. In his broad experience the results obtained by administering androgenic substance in this condition as determined by the number of survivals after three, four and five years are about 100 per cent better than those observed after operation only. This fact indicates that testosterone propionate exercises a protective or prophylactic action against recurrences of mammary cancer in patients who have been surgically treated.

High doses of testosterone propionate, up to 175 mg. a week, may and should be used after operations for mammary cancer, and this treatment should be continued for many years. The criterion which should be adopted for the selection of the dosage is the grade of histologic malignancy of the tumor.

The effects of this therapy are of secondary importance. They consist in signs of virilization, which occur almost exclusively in young women—at a rate of 50 per cent, and of disturbances of menstruation, even including amenorrhea, which occur in almost all patients; early cessation of menstruation is often observed in women between the ages of 40 and 50.

Diagnosis of Tubal Pregnancy by Hysterosalpingography

Dr. A. Campos da Paz Fo. is opposed to the use of hysterosalpingography for the diagnosis of tubal pregnancy. Dr. Campos believes the roentgenologic findings are not characteristic. Analyzing the observations of several authors who have used the method, he emphasizes the variety of x-ray films described by them. He criticizes the so-called lacunar image which is observed in ectopic pregnancies only in exceptional instances; however, he presents 1 such case of his own. He also presents several hysterosalpingograms made to test the tubal patency in cases of sterility which show pictures identical to those observed by several authors during tubal abortions and described as lacunar images. In Campos's opinion they represent the contrast medium spreading into the peritoneal cavity. Based on this observation he emphasizes the need for taking several hysterosalpingograms and establishes a difference between a "permanent picture" and a "transitional picture." As to the dangers of hysterosalpingography in the diagnosis of the tubal pregnancy, Campos reports a case in which rupture of the tube occurred at the exact moment when exploration was performed.

Montenegro's Intradermal Test in Leishmaniasis

Dr. Humberto Cerruti presented before the Sociedade de Medicina e Cirurgia de São Paulo his researches on the subject of the influence of conditions of the skin on diagnostic cutaneous tests, especially tuberculin tests. He stressed the importance of the differences of reactivity compared on normal skin areas and in scars. Dr. Cerruti performed Montenegro's tests (intradermal reaction) on normal skin and scars due to leishmaniasis, smallpox, trauma and skin of previous positive Montenegro's tests.

From the observations made in 25 cases of leishmaniasis Cerruti concluded that there is no difference in the reactivity of normal skin and scars, specific, unspecific or consequent to Montenegro's tests. This is another confirmation of the specificity of the test, which is not influenced by local cutaneous conditions.

Schistosomiasis Mansoni in Minas Gerais, Brazil

Beginning a survey on schisotosomiasis in Minas Gerais, Brazil, Drs. Valdemar Versiani, A. Viana Martins and Osvino Pena Sobrinho report their findings in Belo Horizonte, the capital of this state. The feces of 2,352 pupils (7 to 15 years old) from twenty-four schools were examined and 12.5 per cent were found to be positive. The incidence of Schistosoma mansoni was greater among boys, mainly the poor ones. The percentage rose from 8.47 at 7 years of age to 25 at 15. The greater number of cases were from the suburbs and environs of the town, along the streams where infested snails found previously. The authors pointed out the necessity of utilizing better knowledge of schistosomiasis spreading in the state as a basis for selecting the foci of epidemiologic importance for further prophylactic work.

Maternal Mortality in São Paulo

In a recent study on the mortality of mothers in São Paulo Dr. Silvio Oliveira de Barros draws conclusions based on 36,588 births registered in that city during one year. Dr. Silvio concludes that the maternal mortality index is being reduced in the city of São Paulo because it has fallen from 5.30 per thousand in the period 1933-1937 to 4.35 in the period 1938-1942 and to 3.77 for the year 1943. The principal causes of death were puerperal infections 28.9 per cent, toxemias 20 per cent, hemorrhage 21 per cent, accidents of labor 15 per cent and abortion and extrauterine pregnancy 14 per cent. The author proposes certain steps that would lessen the mortality of mothers.

Marriages

DAVID MELVIN COGDELL to Miss Virginia Antoinette Chance, both of Fayetteville, N. C., June 1.

RAYMOND E. ROBERTSON, Indianapolis, to Miss Mary Helen Bassett in Chicago, May 25.

JULIAN J. KELLER, Bay Pines, Fla., to Miss Ethyl Overton of Clearwater, May 25.

ROBERT LEE GARRISON to Miss Mary Long Griffin, both of Charlotte, N. C., June 4.

HAROLD M. ALLISON to Miss Betty Williams, both of Greenville, S. C., April 27.

JACK ALLAN WEISS, Chicago, to Miss Edith Barkow in New York, July 5.

GUY E. MARCY, Yakima, Wash., to Miss Bernice Shafer of Montesano, May 4.

Correspondence

THE EXPRESSION OF PROTHROMBIN VALUES

To the Editor:—In an article in THE JOURNAL July 13, page 879, Evans and Boller discussed the use of anticoagulant drugs in the treatment of vascular disorders. Throughout the paper frequent mention is made of prothrombin levels produced by the action of Dicumarol (3,3'-methylene-bis-[4-hydroxycoumarin]). Although these levels are expressed in terms of "per cent," no mention is made of the method used to determine the prothrombin levels. This omission has been noted in many of the current reports concerning the use of Dicumarol or in related anticoagulant problems (except when the author has a new method of his own to propose).

The literature contains many modifications and variations of prothrombin determination methods. Furthermore, the methods of expression of the results are almost as numerous as the methods themselves. Thus the term "prothrombin of 50 per cent" has no significance unless the method is also mentioned; it does not indicate whether the value means 50 per cent of normal or an absolute level of plasma prothrombin of 50 per cent.

The values expressed by Quick's one stage method are based on the hyperbolic curve. In some of the modified one stage methods, in which the determination is also performed on a "normal" patient, the values are expressed as "per cent of normal" and represent a linear function. These last values are in essence an index based on the variability of the "normal patient" used.

That this is an important point can be seen by any one who wishes to duplicate work of this type (clinically). The effectiveness of the therapy with Dicumarol depends on the plasma prothrombin level which is reached and maintained.

BEN FISHER, Chicago.

MINERAL OIL AND FECAL INCONTINENCE

To the Editor:—The present shortage of edible vegetable oils and the ready availability and cheapness of mineral oil have caused considerable substitution of the latter by some eating establishments. Within a short time I have seen 3 patients with incontinence of stool the cause of which was ingestion of food prepared with mineral oil. At times the amount eaten has been sufficient to produce leakage and considerable concern in those afflicted. The patients were so emotionally upset that a prompt diagnosis with the reassurance that comes with it practically becomes an act of mercy.

C. D., a man aged 34, while at work was told that he had sat in some grease. He went home to change his clothes and found himself quite soiled. After cleaning himself he returned to work, and a short time later he felt soiled again and on inspection found this to be the case. He then phoned me in a state of panic. On examination it was revealed that the perianal tissue and buttocks were soiled with a film of dark oily material. The sphincter muscles were in good tone. The anal canal was lubricated with the same material, and the rectum was full of a soft mass of similar material. On questioning, it was revealed that a meal eaten about six hours earlier had consisted of a large helping of a very oily Italian spaghetti dish. As the patient and the proprietor of the restaurant were friends, it was readily ascertained that the cook had "gone a little heavy on the mineral oil."

H. H., a woman aged 25, was greatly embarrassed when it was called to her attention that she had soiled her clothes, and when she realized that she had done this unawares great apprehension was added. Examination revealed normal sphincter tone and that the rectum contained oily material. For several days she had been eating lunches of green salads, which she remembered were drenched in a heavy oily dressing.

J. C., a man aged 46, had soiled himself slightly on several occasions. He was advised to remember where and what he had eaten and to report for examination if his trouble recurred. He did this and it was found that the leakage followed a meal of meat balls and spaghetti which was quite greasy. The rectal examination was negative except for the presence of a small amount of soft oily feces. The agent who supplied the restaurant with oil and grease stated that he knew they were adding mineral oil as a "filler" and had warned them that they would get into trouble.

In addition to these 3 cases of incontinence due to unsuspected ingestion of mineral oil in foods, other cases will undoubtedly appear as long as the shortage of edible oils continues, and a prompt diagnosis can readily be made if the physician keeps the possibility in mind.

STANLEY R. TRUMAN, M.D., Oakland, Calif.

Bureau of Investigation

CEASE AND DESIST ORDERS

Abstracts of Certain Federal Trade Commission Releases

The work of the Federal Trade Commission in helping to protect the public against misrepresentation or fraud in the medical as well as other fields, has been greatly extended by the provisions of the Wheeler-Lea Amendment to the Federal Trade Commission Act. The Food, Drug and Cosmetic Act of 1938 increased the Food and Drug Administration's control of the advertising claims and statements made on the label of a medicine or on the carton or in the accompanying leaflet, whereas what might be termed collateral advertising, that which appears in circulars, newspapers and magazines and over the air, comes more actively within the purview of the Federal Trade Commission by virtue of the Wheeler-Lea Amendment.

THE JOURNAL has at various times commented on the activities of the Federal Trade Commission in this connection, even before the Wheeler-Lea Amendment gave it its added powers. In some cases the Commission may accept from the person or concern involved a stipulation that the objectionable practices or claims cited will be discontinued. In other cases the Commission issues what is known as a Cease and Desist Order, in which the individual, manufacturer or distributor cited is ordered to cease and desist from practices which have been declared objectionable. In some cases the claims cited have been discontinued by the firms several months (or even longer) before the issuance of the order. Abstracts of some of the orders issued in 1944 and 1945 follow in this form: name of product, name of distributor, date of issuance of complaint, date of issuance of Cease and Desist Order and terms of order.

En-Ex.—Phillip Bartell, trading as the En-Ex Company and En-Ex Distributing Company, Cleveland; complaint issued June 3, 1942; order issued Jan. 27, 1945. Order directed respondent to cease representing that En-Ex is a cure or remedy for psoriasis and will cause eruptions, blotches or other psoriatic lesions to disappear permanently or contribute more to their disappearance than to remove or help remove the scales therefrom; that it will cure or prevent falling hair or have any effect on dandruff beyond affording temporary relief. Bartell further was ordered to discontinue any advertising which did not reveal that En-Ex should not be permitted to come into contact with the eyes or any mucous membrane of the body, and that if irritation results from its use on the skin, such use should be discontinued. It was provided, however, that such advertisement need contain only the statement, "Caution: Use only as directed," when the same warning is given on the label.

Flo Triple XXX Compound and An-Tex Inserts.—Bland Products Company, Chicago; complaint issued March 24, 1944; order issued Sept. 10, 1944. Order directed respondent to discontinue advertisements which represented that "Flo Triple XXX Compound" constitutes an effective treatment for delayed menstruation or can be depended on to terminate pregnancy; that An-Tex Inserts is effective in preventing infection or disorders resulting therefrom, or that it will prevent conception. The order further directed the concern to discontinue any advertisement

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which did not reveal that the Flo Triple XXX Compound should not be used in the presence of abdominal pains or other symptoms of appendicitis, though it provided that such advertisements need contain only the statement, "Caution: Use only as directed," if the label instructions should contain a warning to the same effect. According to the Commission's findings, this product is an irritant laxative and potentially dangerous when taken by persons suffering from symptoms of appendicitis. In January 1938 one Carlton Reutzahn, trading as Bland Products Company, Chicago, had entered into a stipulation with the Commission, agreeing to cease representing that "Flo Compound" in two strengths, XX and XXX, was a competent treatment for certain conditions peculiar to women.

Mayo Bros. Vitamin B Complex, Mayo Bros. Vitamin B_1 and Mayo Bros. Family Formula.—Irby L. and Oran Frank F. Mayo and Paul T. Murry, doing business as Mayo Brothers Vitamins, Inc., Los Angeles; complaint issued Sept. 15, 1943; order issued Feb. 15, 1945. Order directed respondents to cease representing that they or their products are in any way connected with the Mayo Clinic of Rochester, Minn., and to discontinue the following misrepresentations for their products: That human health and well being require vitamins in addition to the supply commonly obtained in a well-balanced diet; that sickness or conditions described as lackadaisical, run-down or nervous, mental or physical sluggishness, lack of energy or coordination, fatigue and lessened physical capacity are usually associated with and due to a deficiency of B complex vitamins; that Mayo Bros. Vitamin B Complex and Vitamin B_1, either or both, have any significant value in treating conditions named above, except when they are due to vitamin B_1 deficiency; that these products have any value in eliminating the ill effects of hurried eating, intense work, or hard play, or will insure health or vitality, or that Mayo Bros. Family Formula will supply more than a small fraction of the known daily requirements of iron, manganese and iodine. The order further directed the respondents to cease representing, through use of the words "Mayo Bros." or any similar term in the names of their firm or their preparations, or in any other manner, that these products were produced or sponsored by the Mayo Clinic of Rochester or the founders thereof. It was permitted, however, that this provision should not prevent the use of the words "Mayo Bros." if it is made clear in immediate conjunction therewith that they are not in any way connected with the Mayo Clinic.

Ostrex.—David and Lillian Steuerman, trading as Steuerman Advertising Agency, New York; complaint issued Jan. 29, 1943; order issued March 24, 1945. Order directed respondents to cease representing that Ostrex is a remedy or effective treatment for an exhausted, worn-out, run-down feeling or body weakness, or similar conditions, except when due solely to iron deficiency in the body; that it contains sufficient quantities of calcium, phosphorus and vitamin B_1 so that, when taken as directed, it provides an adequate treatment for conditions caused by deficiency of such substances in the body; that it contains any ingredient other than iron which acts as a tonic or stimulant, or that an exhausted, worn-out, run-down feeling or similar conditions may not be due to old age.

Pabst Okay Special.—Pabst Pharmaceutical Company, trading as Pabst Chemical Company, Chicago; complaint issued Nov. 22, 1941; order issued July 7, 1944. Order directed the concern and its agents to cease representing that the product is a cure or remedy for unnatural discharges due to infections of the urinary passage; that it has any curative value or constitutes a competent treatment for any venereal disease, or that its ingredients are recognized by physicians as being a competent or effective treatment for such diseases. The order further directed the respondent to discontinue any advertisement which did not reveal that the therapeutic value of the preparation is limited to reducing the discharge of pus due to venereal diseases; that it will not cure such disorders or destroy the specific germ causing them, and that such diseases may be communicable even though the symptoms of discharge have disappeared. A previous order issued by the Commission Feb. 5, 1935, directed the same concern to desist from representing by published advertisements or by radio that its Pabst Okay Special is a cure, remedy or competent and adequate treatment for certain venereal diseases.

Tu-Way Massager and Arnold's Electro-Vaporized Mineral Bath.—Ed. W. Arnold Company, Logansport, Ind.; complaint issued August 25, 1942; order issued Dec. 26, 1944. Order directed respondent to cease representing that the massaging device produces a scientific massage, reduces body weight, oxidizes fatty deposits within the body, relieves constipation or tension in muscles, induces sleep or gives the body surface benefits equivalent to those produced by exercise. Further, the order directed the Arnold concern to cease representing that its so-called Electro-Vaporized Mineral Bath (one model of which was known as "New DeLuxe Multi-Treatment Cabinet") is a cure or remedy or possesses any value in the treatment of diabetes, blood disorders, dropsy, asthma, kidney trouble, paralytic insanity, heart trouble, certain rheumatic conditions or the many other disorders played up in the advertising. According to the Commission's findings, the effect of the cabinet treatment is limited to such temporary benefits as may result from the application of heat, and substantially the same results may be obtained from an ordinary warm tub bath. Another federal agency, the Food and Drug Administration, also took action against the Arnold concern by issuing a Notice of Judgment against it in February 1943 for making false claims for its Tu-Way Massager, such as that it was founded on an exact scientific principle and would positively remove fat spots, beautify the figure and break down fatty deposits so that they would be oxidized within the body, with the result that the residue would be carried away by the blood stream and disappear through the organs of elimination, leaving the flesh firmer and more solid.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Charitable Hospitals: Criteria of Exemption from Taxes.—The plaintiff county instituted proceedings to foreclose delinquent tax liens against the defendant hospital. From a judgment in favor of the county the defendant appealed to the Supreme Court of Oregon.

In 1923 certain citizens of Corvallis, Ore., organized a corporation for the purpose of erecting and maintaining a hospital, the corporation being organized under the state laws pertaining to corporations for profit. Stock was issued to the general public, much of it being subscribed by the local physicians, and the hospital was erected. It proved to be a disappointment financially, however, and in 1926 a new corporation was founded under the laws governing charitable corporations. The stock of the first corporation amounted to about $49,000, and a $40,000 bond issue of the first corporation was secured by a first mortgage on the real estate. The charitable corporation took a conveyance of the real estate and equipment of the first corporation, subject to the first mortgage. It also issued bonds in the amount of the outstanding stock and secured them by a second mortgage, which it delivered to a trustee for the stockholders. This bond issue is still outstanding. The first mortgage has been reduced from the original $40,000 to $12,500.

Subdivision 3, section 110-201, O. C. L. A., reads as follows:

> Property exempt from taxation. The following property shall be exempt from taxation: . . .
>
> (3) The personal property of all literary, benevolent, charitable and scientific institutions incorporated within this state, and such real estate belonging to such institutions as shall be actually occupied for the purposes for whch they were incorporated.

In order for the defendant's property to be exempt it must fall strictly within the statute. Hospitals, as such, said the Supreme Court, are not necessarily public charities, and hence they enjoy no inherent exemption from taxation. Many of the original stockholders in this case were activated by the highest motives in aiding in the organization of this hospital, which the city sorely needed, and regarded their stock subscriptions as in the nature of donations to charity or as contributions toward the betterment of the community. Others, however, looked on their subscriptions as mere investments. The articles of incorporation are prima facie evidence of the character of the corporation as a charitable institution, but such prima facie evidence may be rebutted by evidence that in fact the corporation has not lived up to its chartered objects. It is well settled, continued the court, that the fact that fees are charged those patients who are able to pay does not derogate from the charitable character of the institution, provided the income so derived is used to maintain the institution or extend its facilities devoted to charity, or for other charitable purposes.

It is contended on behalf of the county that the organization of the charitable corporation to take the place of the former corporation was a mere subterfuge, that the old stockholders still expected to derive a profit from the operation of the hospital and that the charitable corporation was formed simply for the purpose of avoiding payment of taxes. The defendant insisted, however, that there is no distinction between issuing bonds in payment for an existing hospital and borrowing money with which to build and equip a new hospital. It therefore argued that if a charitable corporation may borrow money for the purpose of building and equipping a hospital, which evidently it may, without losing its character as a charitable corporation, there is no reason why it may not issue bonds in consideration of a conveyance to it of a hospital already built and equipped.

The distinction, however, said the court, is clear. The stockholders were in effect the old corporation and are in fact the members of the new one. They had made a bad investment.

The plan of organizing a charitable corporation was not conceived (at least chiefly) for the purpose of alms giving but in order that the hospital, through avoiding the burden of taxes, might be enabled to operate at a profit and so continue in operation, so that peradventure in time the stockholders might recover the amount of their investment. Moreover, although the hospital was a losing venture, they in effect sold the property to the new corporation at its full cost or value and even made provision for the payment of interest to themselves out of the profits of operation.

In discussing the criteria of a charitable hospital the court said that its funds are derived mainly from public and private charity, its affairs are conducted for the great public purpose of administering to the comfort of the sick, and there is no expectation on the part of those immediately interested in the corporation of receiving any compensation which will inure to their own benefit, and no right to receive such compensation. Applying these criteria to the instant case, the Supreme Court of Oregon pointed out that it could not say from the evidence that "those immediately interested in the corporation" do not expect to receive compensation, by way of repayment of their bonds with interest, from the profits of its operation. By the terms of the bonds, and of the mortgage securing them, they have a right to receive such compensation. To say that in receiving repayment of their investment with interest (or in retaining the right to demand such repayment) they take no more than that to which they are justly entitled is to ignore the fact that their original investment was a losing venture. It is immaterial that the corporation says that its bonds are of no value and that it does not intend to pay them. The bondholders have not said so, and they alone can. These facts, concluded the court, are fatal to the contention that the corporation is in fact a charitable one. Accordingly the judgment in favor of the county was affirmed. —*Benton County v. Allen, 133 P. (2d) 991 (Ore., 1943).*

Motor Vehicles: "Under the Influence of Intoxicating Liquor" Defined.—The defendant was convicted under a statute prohibiting the operation of a motor vehicle while under the influence of intoxicating liquor. On appeal from such conviction, the following discussion of the meaning of the phrase "under the influence of intoxicating liquor" was voiced by the Supreme Court of North Carolina.

The meaning of the phrase "under the influence of liquor" is defined in Black's Law Dictionary, ed. 3, page 1775, as follows:

> In statutes or ordinances relating to the operation of motor vehicles it has been construed as equivalent to the words "in an intoxicated condition," . . . and to the words "in a drunken or partly drunken condition" . . . but not as synonymous with the words "while intoxicated" . . . The expression is said to cover not only all the well known and easily recognized conditions and degrees of intoxication but any abnormal mental or physical condition which is the result of indulging in any degree in intoxicating liquors and which tends to deprive the driver of that clearness of intellect and control of himself which he would otherwise possess. . . . It is applicable to the condition created where intoxicating liquor has so far affected the nervous system, brain or muscles of the driver as to impair to an appreciable degree his ability to operate an automobile in a manner that an ordinarily prudent and cautious man in the full possession of his faculties, using reasonable care, would drive a similar vehicle under like conditions. . . .

We are of the opinion, said the court, that the legislature did not intend to make a distinction between a person who is drunk and one who is under the influence of liquor. A very small quantity of intoxicating liquor might substantially affect the mental and physical faculties of one person, while such amount might not appreciably affect some other person. Before the state is entitled to a conviction it must be shown beyond a reasonable doubt that the defendant was driving a motor vehicle on a public highway of this state while under the influence of intoxicating liquor or narcotic drugs. A person is under the influence of intoxicating liquor or narcotic drugs, within the meaning and intent of the statute, when he has drunk a sufficient quantity of intoxicating beverage or taken a sufficient amount of narcotic drugs, to cause him to lose the normal control of his bodily or mental faculties, or both, to such an extent that there is an appreciable impairment of either or both of these faculties.—*State v. Carroll, 37 S. E. (2d) 688 (N. C., 1946).*

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, Aug. 17, Page 1384.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Montgomery, Jan. 21-23. Sec., Dr. B. F. Austin, 519 Dexter Ave., Montgomery 4.

ARIZONA: * Phoenix, 1st week in October. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

ARKANSAS: * Little Rock, Nov. 7-8. Sec., Medical Board of the Arkansas Medical Society, Dr. L. J. Kosminsky, Texarkana. *Eclectic.* Little Rock, Nov. 7. Sec., Dr. C. H. Young, 1415 Main St., Little Rock.

CONNECTICUT: * *Examination.* Hartford, Nov. 12-13. Sec., Dr. Creighton Barker, 258 Church St., New Haven. *Homeopathic.* Derby, Nov. 12-13. Sec., Dr. J. H. Evans, 1488 Chapel St., New Haven.

DISTRICT OF COLUMBIA: *Reciprocity.* Washington, Sept. 9. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington.

FLORIDA: * *Examination.* Jacksonville, Nov. 26-27. Sec., Dr. Harold D. Van Schaick, 2736 S.W. 7th Ave., Miami 36.

GEORGIA: Atlanta, Oct. 8-10. Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta 3.

ILLINOIS: Chicago, Oct. 15-17. Sec., Dept. of Registration & Education, Mr. Philip Harman, Springfield.

INDIANA: *Examination.* Indianapolis, June 1947. Exec. Sec., Board of Medical Registration & Examination, Miss Ruth V. Kirk, 627 K. of P. Bldg., Indianapolis 4.

KANSAS: Kansas City, Dec. 4-5. Sec., Board of Medical Registration & Examination, Dr. J. F. Hassig, 905 N. Seventh St., Kansas City 10.

KENTUCKY: *Examination.* Louisville, Dec. 16-18. Sec., State Board of Health, Dr. P. E. Blackerby, 620 S. Third St., Louisville 2.

MAINE: Portland, Nov. 12-13. Sec., Board of Registration of Medicine, Dr. A. P. Leighton, 192 State St., Portland.

MARYLAND: *Examination.* Baltimore, Dec. 10-13. Sec., Dr. J. T. O'Mara, 1215 Cathedral St., Baltimore 1. *Homeopathic.* Baltimore, Dec. 10-11. Sec., Dr. J. A. Evans, 612 W. 40th St., Baltimore.

MASSACHUSETTS: *Examination.* Boston, Nov. 19-22. *Endorsement.* Boston, Sept. 12. Sec., Board of Registration of Medicine, Dr. H. Q. Gallupe, 413-F State House, Boston 33.

MICHIGAN: * *Examination.* Lansing, Oct. 9-11. Sec., Board of Registration in Medicine, Dr. J. E. McIntyre, 100 W. Allegan St., Lansing 8.

MINNESOTA: * Minneapolis, Oct. 15-17. Sec., Dr. J. F. Du Bois, 230 Lowry Medical Arts Bldg., St. Paul 2.

MISSISSIPPI: *Reciprocity.* Jackson, Dec. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson 113.

MISSOURI: *Examination.* St. Louis, Oct. 28-30. Dir., Medical Licensure, State Board of Health, Mrs. Lucy Motley, State Capitol Bldg., Jefferson City.

MONTANA: Helena, Sept. 30-Oct. 2. Sec., Dr. O. G. Klein, First Nat'l Bank Bldg., Helena.

NEW HAMPSHIRE: Concord, Sept. 12-13. Sec., Board of Registration in Medicine, Dr. John S. Wheeler, 107 State House, Concord.

NEW JERSEY: *Examination.* Trenton, Oct. 15-16. Sec., Dr. E. S. Hallinger, 28 W. State St., Treuton.

NEW MEXICO: * Santa Fe, Oct. 7-8. Sec., Dr. LeGrand Ward, 141 Palace Ave., Santa Fe.

NEW YORK: *Examination.* Albany, Buffalo, New York & Syracuse, Oct. 7-10. Sec., Dr. Jacob L. Lochner, Education Bldg., Albany.

NORTH CAROLINA: *Endorsement.* Asheville, Sept. 30. Act. Sec., Mrs. L. McNeill, 226 Hillsboro St., Raleigh.

OHIO: *Examination.* Columbus, Dec. 3-5. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

PENNSYLVANIA: *Examination.* Harrisburg, Oct. Act. Sec., Bureau of Professional Licensing, Dept. of Public Instruction, Mrs. M. G. Steiner, 351 Education Bldg., Harrisburg.

RHODE ISLAND: *Examination.* Providence, Oct. 3-4. Sec., Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH CAROLINA: Columbia, Nov. 11-12. Sec., Dr. N. B. Heyward, 1329 Blanding St., Columbia.

VIRGINIA: * Richmond, Dec. 3-6 Sec., Dr. J. W. Preston, 30½ Franklin Rd., Roanoke.

WEST VIRGINIA: Charleston, Oct. 7-9. Commissioner, Public Health Council, Dr. J. E. Offner, State Capitol, Charleston 5.

WYOMING: *Examination.* Cheyenne, Oct. 7-8. Sec., Dr. G. M. Anderson, Capitol Bldg., Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARIZONA: *Examination.* Tucson, Sept. 10. Sec., Dr. R. L. Nugent, Science Hall, University of Arizona, Tucson.

COLORADO: *Examination.* Denver, Sept. 11-12. Sec., Dr. Esther B. Starks, 1459 Ogden St., Denver.

CONNECTICUT: *Examination.* New Haven, Oct. 12. Exec. Asst., State Board of Healing Arts, Mr. W. G. Reynolds, 250 Church St., New Haven.

DISTRICT OF COLUMBIA: *Examination.* Washington, Oct. 21-22. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington.

FLORIDA: *Examination.* Gainesville, Nov. 2. Sec., Dr. J. F. Conn, John B. Stetson Univ., Deland.

IOWA: *Examination.* Des Moines, Oct. 8. Corresponding Sec., Division of Licensure & Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines 19.

MICHIGAN: *Examination.* Ann Arbor, Oct. 11-12. Sec., Miss Eloise LeBeau, 101 N. Walnut St., Lansing.

MINNESOTA: *Examination.* Minneapolis, Oct. 1-2. Sec., Dr. Raymond N. Bieter, 105 Millard Hall, Univ. of Minnesota, Minneapolis 14.

NEBRASKA: *Examination.* Omaha, Oct. 1-2. Dir., Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9.

OREGON: *Examination.* Portland, Nov. 2. Sec., Mr. C. D. Byrne, Univ. of Oregon, Eugene.

SOUTH DAKOTA: Sioux Falls, Dec. 6-7. Sec., Dr. G. M. Evans, Yankton.

WISCONSIN: *Examination.* Madison, Sept. 21. Sec., Prof. R. N. Bauer, 152 W. Wisconsin Ave., Milwaukee 3.

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Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

71:457-578 (May) 1946

Bone Marrow Infusion and Its Complications. J. J. Quilligan Jr. and H. Turkel.—p. 457.
Congenital Mediastinal Cysts of Foregut Origin. J. L. Olenik and J. W. Tandatnick.—p. 466.
Scarlet Fever Among Pueblo Indians: Observations on Susceptibility and Occurrence. M. L. Frank and C. A. Elkin.—p. 477.
Causes of Prematurity: VII. Influence of Uterine Bleeding on Incidence of Prematurity. Estelle W. Brown, R. A. Lyon and Nina A. Anderson.—p. 482.
New Type of Familial Congenital Chronic Hemolytic Anemia. E. Stransky and A. C. Regala.—p. 492.
*Treatment of Infantile Congenital Syphilis with Penicillin. A. Heyman and J. Yampolsky.—p. 506.
Relationship of Pediatrics and Psychiatry. M. J. E. Senn.—p. 537.

Penicillin in Infantile Congenital Syphilis.—Heyman and Yampolsky report the results of treatment with penicillin of 22 children with congenital syphilis. All the children were less than 17 months of age at the beginning of treatment, and none had received previous antisyphilitic therapy. Each child showed syphilitic lesions of the skin and/or long bones in addition to a positive serologic reaction. Sodium penicillin dissolved in isotonic solution of sodium chloride was given intramuscularly every three hours for sixty doses within a period of seven and one-half days. No other antisyphilitic treatment was given. Serologic tests were made at monthly intervals thereafter, and the cases were followed from nine to eighteen months. Thirteen of these patients are now clinically well, have negative serologic reactions for syphilis and have normal spinal fluids. Four others show persistently positive serologic reactions of the blood sixteen months after treatment. These patients are also well and have normal spinal fluid. There were three deaths in this series and 2 instances of serologic and spinal fluid relapses. The deaths occurred in the more severely infected group, and seroresistance was found chiefly in the older children. Penicillin appears to be an effective agent in the treatment of congenital syphilis.

American Journal of Hygiene, Baltimore

43:195-346 (May) 1946

Observations on Tsutsugamushi Disease (Scrub Typhus) in Assam and Burma: Preliminary Report. T. T. Mackie and others.—p. 195.
Tests Against Chiggers in New Guinea to Develop Practical Field Method for Impregnating Uniforms with Dimethylphthalate for Scrub Typhus Prevention. R. C. Bushland.—p. 219.
New Guinea Field Tests of Uniforms Impregnated with Miticides to Develop Laundry-Resistant Clothing Treatments for Preventing Scrub Typhus. R. C. Bushland.—p. 230.
Epidemiologic Field Studies of Infectious Hepatitis in Mediterranean Theater of Operations. R. L. Gauld.—p. 248.
*Epidemic Infectious Hepatitis in Small Iowa Community. D. J. Davis and R. C. Hanlon.—p. 314.
Studies on Imported Malarias: 4. Infectivity of Malarias of Foreign Origin to Anophelines of Southern United States. M. D. Young, T. H. Stubbs, J. M. Ellis and others.—p. 326.

Epidemic Infectious Hepatitis in Iowa Community.—Davis and Hanlon report an epidemic of infectious hepatitis involving 276 cases but no deaths, of which 222 were investigated epidemiologically. The epidemic occurred in and near the town of Tama, Iowa, from September 1944 until June 1945. A morbidity of 6.6 per cent was experienced, and the age group 5 to 14 years was attacked most intensively. Five persons who had the disease reported having had previously a similar illness with jaundice. The peak of incidence was reached in December and January and declined during the spring. The risk for members of the household of a primary case of contracting hepatitis was as great as or greater than a similar risk in scarlet fever, diphtheria or bacillary dysentery and was greatest for the age group 5 to 14 years. The incubation period appeared to be from twenty-five to thirty-five days. The subcutaneous inoculation of samples of pooled serums taken within three days of onset of the disease was followed by hepatitis in 1 of 60 young adult volunteers sixteen weeks after inoculation. The epidemiologic evidence indicates that personal association between an infected person and one who was susceptible was the important factor in the dissemination. No facts were obtained incriminating a common water, milk or food supply.

Archives of Internal Medicine, Chicago

77:477-596 (May) 1946

*Effects of Plasma and Fluid on Pulmonary Complications in Burned Patients: Study of Effects in Victims of Cocoanut Grove Fire. M. Finland, C. S. Davidson and S. M. Levenson.—p. 477.
Hyperactive Cardioinhibitory Carotid Sinus Reflex. M. H. Nathanson.—p. 491.
Systemic Infection Due to Torula Histolytica (Cryptococcus Hominis): I. Report of 4 Cases and Review of Literature. G. Q. Voyles and E. M. Beck.—p. 504.
Id.: II. Effect of Chemotherapeutic Agents in Experimentally Produced Infections. E. M. Beck and G. Q. Voyles.—p. 516.
Role of Histamine and Acetylcholine in Mechanism of Heat Allergy: Report of Studies on Soldier. G. A. Peters and J. J. Silverman.—p. 526.
Chronic Hemolytic Anemia: Observations on Effect of Fat Content of Diet and Multiple Red Cell Transfusions. R. S. Evans.—p. 544.
*Concentrated Human Albumin in Treatment of Shock. E. A. Stead Jr., E. S. Brannon, A. J. Merrill and J. V. Warrne.—p. 564.
Review of Neuropsychiatry for 1945. S. Cobb.—p. 576.

Plasma and Fluid in Burned Patients.—Finland and his associates analyzed available data concerning administration of plasma and other fluids to the victims of the Cocoanut Grove fire who were admitted to the Boston City Hospital. Particular attention was given to the effects of these fluids on the complications involving the respiratory tract. The exact cause of the pulmonary lesions in the victims of the Cocoanut Grove fire was not determined, but there was circumstantial evidence which pointed to phosgene as a possible factor. The phosgene theory, as well as other theories which implicated poison gases, was discarded after a more complete analysis of the facts. It seemed more reasonable to assume that the injuries were the result of prolonged exposure to the ordinary gases and fumes which result from the incomplete combustion of the type of furnishings which were to be found in the Cocoanut Grove building. The severity of the injuries seemed to be related to the amount of exposure. When all data were considered, and particularly when the effects of the largest volumes of plasma and fluids given to those who were critically ill were carefully scrutinized, it appeared that pulmonary edema did not occur and that the respiratory complications in general were not aggravated as a result of this therapy.

Concentrated Human Albumin in Treatment of Shock.—Stead and his associates administered solution of concentrated human albumin to 7 normal subjects and 33 patients with circulatory failure. A rise in right atrial pressure and a fall in the hematocrit reading always occurred in the normal subjects. The changes in cardiac output were variable. The arterial pressure and pulse rate usually remained unchanged. In patients with hemorrhage, wounds of the chest, pericardial tamponade, burns, dehydration and infection, satisfactory hemodilution occurred when albumin was given in concentrated form (25 per cent solution). The average increase in volume of blood for the entire group per gram of albumin administered was 14 cc. Dehydration was present in 4 of these patients, and the average increase per gram of albumin was 13 cc. Eleven patients received 50 Gm. of albumin in fifteen minutes or less. The fact that these large quantities of protein can be given so rapidly makes concentrated albumin solution a valuable material to have on hand in the accident ward. The authors conclude that human albumin is a useful substitute for plasma. It cannot replace the use of whole blood, but its small bulk, the ease and rapidity of its administration, its stability at room temperature and the absence of unfavorable reactions make it useful in many emergencies.

Bulletin of Johns Hopkins Hospital, Baltimore

78:325-364 (June) 1946

*Edema of Corneal Epithelium Caused by Atabrine (Quinacrine): Observation on 3 Patients. F. M. Reese.—p. 325.
Sodium Caprylate: New and Effective Treatment for Moniliasis of Skin and Mucous Membranes. E. L. Keeney.—p. 333.
Toxic and Immunologic Properties of Pneumococcus Hemolysin. S. P. Halbert, B. Cohen and Marie E. Perkins.—p. 340.

Edema of Corneal Epithelium Caused by Quinacrine.—Reese presents records of 3 patients who complained of severe blurring of vision while taking 0.2 Gm. of quinacrine a day. One patient had received a larger therapeutic course of quinacrine twenty-one days previously, the second had received therapeutic courses of the drug repeatedly for almost two years up to two months previously and the third patient had received 0.2 Gm. of quinacrine a day for twenty-seven days up to nine days before admission. Examination of these patients' eyes showed edema of the corneal epithelium, "bedewing" of an unusually fine texture and uniform appearance with the slit lamp. All 3 soldiers appeared to be in excellent health. In 2 cases minimal corneal changes visible only by slit lamp examination persisted for three weeks when 0.1 Gm. of quinacrine a day was taken. These changes finally disappeared three weeks after the drug had been discontinued and 0.6 Gm. of quinine a day substituted. A small therapeutic course of quinacrine given to each patient after all slit lamp signs of epithelial edema had disappeared resulted in a full blown recurrence in all three. In each instance the visual disturbance was most severe when the patients were receiving more than the usual suppressive dose of quinacrine (0.1 Gm. per day). Reduction of the dosage to the usual suppressive level did not suffice to clear up the condition entirely. This process is apparently reversible and does not result in permanent damage to the ocular tissues.

Illinois Medical Journal, Chicago

89:205-256 (May) 1946

Plastic and Dental Prosthetic Repair of Jaw Injuries. P. W. Greeley and A. E. Pound.—p. 216.
Use of Preserved Blood Plasma in Civilian Practice. E. F. Pearson. —p. 221.
Intramural Group Psycholotherapy. J. W. Klapman.—p. 226.
*Ochronosis-like Pigmentation Associated with Use of Atabrine. H. S. Sugar and W. W. Waddell.—p. 234.
Examination of Breasts and Pelvic Organs in Apparently Well Women: Review of Findings in 1,600 Women Examined at Cancer Prevention Clinic. Augusta Webster, Alice Phillips, Luella Nadelhoffer and others.—p. 239.

Ochronosis-like Pigmentation Following Use of Quinacrine.—Sugar and Waddell observed in 10 men who had been treated with quinacrine for considerable periods an ochronosis-like pigmentation never described before. These pigmentary deposits are most characteristically seen as a gray-blue discoloration in the bony palate, where it ends as a sharp line at the transition to the soft palate. A gray-blue pigmentation of some or all of the nail beds is the next most obvious sign. This is manifested either as a transverse band at or near the middle of the nail or as a diffuse discoloration of the entire nail bed. The next most obvious finding was pigmentation of the conjunctiva in the palpebral fissure area. The conjunctival pigment extended in patches of varying size from the nasal and temporal sides of the cornea and involved the corneal limbus nasally and temporally, less frequently below, and in 2 cases involved the plica semilunaris and caruncle. The pigment appeared to lie at varying depths. Based on the biopsy findings in 1 case the pigment lies both in the basal layer of the epithelium and below it. This pigmentation associated with the use of quinacrine requires no treatment and is important only in differential diagnosis. The pigmentation may cause considerable concern to some patients. Among the conditions with which it may be confused are carotinemia, Addison's disease, icteric disease, picric acid poisoning, carbolochronosis and alkaptonuric ochronosis.

Iowa State Medical Society Journal, Des Moines

36:231-278 (June) 1946

Relation of Research to Practice of Medicine. D. J. Glomset.—p. 231.
Hypoproteinemia in Surgical Patients. M. J. Brown.—p. 236.
Spontaneous Hematoma of Rectus Muscle in Pregnancy. H. Gerstman. —p. 238.

Journal of International College of Surgeons, Chicago

9:173-300 (March-April) 1946

Advances in Operative Treatment of Cancer of Large Bowel. W. W. Babcock.—p. 179.
Surgery of Stomach and Duodenum at Naval Hospital. G. A. Stevens, H. P. Sloan and J. H. Danglade.—p. 188.
Plastic Reconstruction of Breast and Free Transplantation of the Nipple: Author's One Stage Operation; Microscopic Proof of Survival of Transplanted Nipple. M. Thorek.—p. 194.
Contributions to Study of Extramedullary Plasmocytoma. F. Arel. —p. 225.
Craniocerebral Injuries and General Surgeon. G. E. Kenny.—p. 228.
Perianal Suppuration. I. Back.—p. 237.
Rebuilding Bony Depressions of Face and Skull. M. I. Berson.—p. 243.
Cancer of Larynx: Radiotherapeutic and Surgical Considerations. E. Caceres.—p. 248.
Exstrophy of Ileum Through a Patent Omphalomesenteric Duct with Strangulated Umbilical Hernia: Case Report. D. V. Clark.—p. 251.
Ecchymotic Mask. J. Dwek.—p. 257.
Treatment and Prevention of Thrombosis with Dicumarol. H. Picard. —p. 266.
Tumors of Male Breast. J. C. Pate.—p. 274.

Journal of Nervous and Mental Disease, New York

103:433-546 (May) 1946

Outcome of Tic Syndrome. Margaret Schoenberger Mahler and Jean A. Luke.—p. 433.
Psychopath-like Behavior in War Neurotics. S. R. Lehrman and J. J. Michaels.—p. 446.
Neuropathologic Manifestations Found in a Japanese Prison Camp. C. J. Katz.—p. 456.
Psychiatric Study of Patient with Paroxysmal Hypothalamic Dysfunction. Irma H. Gross.—p. 466.
Sleep and Third Circulation: An Attempt to Solve the Problem of Sleep. M. Gans.—p. 473.
Speech Disorders in World War II: IV. Dysarthria and Dyslalia: Methods of Examination. W. G. Peacher and Georgiana M. Peacher. —p. 484.
Shock Treatment of Psychoses Associated with Pregnancy. F. Feldman, S. S. Susselman, B. Lipetz and S. E. Barrera.—p. 494.
Skin Reactions Observed Under Wartime Stress. D. B. Davis and J. W. Bick Jr.—p. 503.
Intracranial Aneurysm and Polycystic Kidneys. M. J. Madonick, N. Savitsky and L. Hochfeld.—p. 509.
Involuntary Imitative Movements of Contralateral Hand: Report of Case. H. C. Leavitt.—p. 514.

Journal of Pediatrics, St. Louis

28:515-636 (May) 1946

Retention of Electrolyte During Recovery from Severe Dehydration Due to Diarrhea. D. C. Darrow.—p. 515.
*Use of Potassium Chloride in Treatment of Dehydration of Diarrhea in Infants. C. D. Govan Jr. and D. C. Darrow.—p. 541.
Potassium Intoxication: Report of an Infant Surviving Serum Potassium Level of 12.27 Millimoles per Liter. C. D. Govan Jr. and W. M. Weiseth.—p. 550.
*Hot Baths in Treatment of Early Infantile Paralysis. A. D. Gurewitsch and Margaret A. O'Neill.—p. 554.
Use of Normal Serum Gamma Globulin Antibodies (Human) Concentrated (Immune Serum Globulin) in Prevention and Attenuation of Measles. L. K. Sweet and T. L. Hickman.—p. 566.
Use of Normal Serum Gamma Globulin Antibodies (Human) Concentrated (Immune Serum Globulin) in Treatment of Premature Infants. L. K. Sweet, Jane Howell, Lucy Gale McMurray and others.—p. 571.
*Hemolysis from Irregular Isoagglutinins (Cold Agglutinins) Following Treatment for Erythroblastosis Fetalis. H. N. Sanford and J. R. Gerstley.—p. 574.
Case of Stevens-Johnson Disease (Erythema Multiforme Bullosa) Treated with Penicillin. A. A. Goldfarb.—p. 579.
Penicillin in Treatment of Childhood Gonorrhea. H. F. Lee and W. Sussman.—p. 590.
Pemphigus: Successful Treatment with Penicillin; Report of Case. J. L. Callaway, J. Arena, R. O. Noojin and Kathleen A. Riley.—p. 592.
Poor Eating Habits of Runabout Child: Role of Physiologic Anorexia. Edith S. Hewitt and C. A. Aldrich.—p. 595.
Tick Paralysis in Children. G. E. Prince, J. C. Keeley and E. P. Scott. —p. 597.
Acute Infectious Urticaria. L. Bivings.—p. 602.
Enterogenous Cyst of Ileocecal Region. W. H. Mehn and W. J. Morrow. —p. 605.
Mediterranean Anemia (Cooley) in Negro Girl. H. K. Faber and B. M. Roth.—p. 610.
Epidermolysis Bullosa Hereditaria: Report of 2 Cases. Edna Zeltner Mortimer.—p. 613.
Pituitary Dwarfism?: Spontaneous Correction. I. P. Bronstein and E. Cassorla.—p. 618.

Potassium Chloride in Diarrhea in Infants.—Govan and Darrow present a new plan for the treatment of diarrhea in infants. The various procedures which have been employed during the past twenty years are followed except that replenishment of body electrolyte is accomplished by adding potassium

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chloride to the solutions containing sodium chloride, sodium lactate and glucose. In all severely ill patients blood or plasma infusions are also carried out. The results obtained with the new treatment in the last half of the diarrhea season are compared with the results obtained with the old treatment during the first half of the diarrhea season. The two series of cases were of comparable severity. With the new treatment 3 of 50 patients died; with the conventional treatment 17 of 53 patients died. The decrease in mortality was not accompanied by a shortening of the duration or a decrease in intensity of the diarrhea. Administration of potassium chloride in conjunction with the other established procedure enables the babies to recover from some attacks of diarrhea that would otherwise be fatal. Potassium intoxication with complete heart block developed once, but recovery followed treatment. Five patients developed intense erythema followed by desquamation. This complication did not otherwise alter the course.

Hot Baths in Early Infantile Paralysis.—Gurewitsch and O'Neill used Kenny packs in 1941, 1942 and 1943 in the treatment of infantile paralysis. In November 1943 they decided to treat several patients who remained tender and very stiff in spite of prolonged packs with frequent daily immersions in hot water. They observed a definite spurt in loosening up and decreased pain. After January 1944 hot baths became the treatment of choice and packs were prescribed only for those patients who for one reason or another could not be put into the pool. A total of 307 patients have been treated up to Sept. 1, 1945. The water, which has a temperature of 104 F., is shallow so that the patient can lie flat with his head only slightly raised on a head rest. Gentle, free motion is not restricted. Immersions are started as soon as the patient has been admitted—usually from an isolation hospital. Patients with severe stiffness and tenderness are given six immersions a day, lasting fifteen to twenty minutes each. As pain and stiffness subside the number of immersions is reduced. The authors gained the impression that hot baths relieve muscle soreness and tightness faster and more effectively than Kenny packs. The patients prefer the pool treatment, and nearly all of those who had both, and who were old enough to express an opinion, felt that their pain was relieved more rapidly by the baths.

Hemolysis from Cold Agglutinins Following Treatment for Erythroblastosis Fetalis.—Sanford and Gerstley report a case of erythroblastosis neonatorum in which transfusions from five donors of the same blood group, both of Rh-negative and Rh-positive blood, were given. An intense hemolysis resulted from cold agglutinins in the infant's blood which reacted on the blood of these five donors. Recovery took place immediately after the blood from two Rh-positive donors was given that was not hemolyzed by the infant's cold agglutinins. The infant completely recovered after receiving twenty-two transfusions, or a total of 2,300 cc. of blood, over thirty-three days. During this period the infant's icterus index rose to 470 and remained at this point for eleven days. This did not cause kernicterus or harm the child in any way.

Michigan State Medical Society Journal, Lansing

45:551-702 (May) 1946

Present Policies in Treatment of Severely Burned Patient: Outline of Treatment, Including Use of Whole Blood Transfusions. H. J. Lange, K. N. Campbell and F. A. Coller.—p. 619.
*Polycythemia Vera: Variability of Presenting Symptoms; Economical and Symptomatically Satisfactory Treatment with Phenylhydrazine. W. J. O'Connell and W. E. Jahsman.—p. 633.
*Carbohydrate Metabolism in Osteoporosis and Paget's Disease. R. C. Moehlig and H. L. Abbott.—p. 642.
Misunderstood Postnasal Discharge. D. F. Weaver.—p. 646.
New Interpretation of So-Called Positive Patch Tests, with Special Reference to Metals Used in Industry. S. W. Becker.—p. 647.

Polycythemia Vera.—O'Connell and Jahsman report 12 cases of polycythemia vera with a wide variety of presenting symptoms, though most frequently these were referred to the central nervous system. Relief from these symptoms has often served as a better guide in treatment than the number of red blood cells. No specific or curative treatment has yet been found, but apparently satisfactory palliative measures include venesection, spray irradiation of large areas of the body, radioactive phosphorus and drugs. Except in patients intolerant to phenylhydrazine, this preparation has proved as satisfactory as the other methods of treatment mentioned for palliative results and, from the standpoint of cost to the patient, the most economical. This drug costs the patient about $3 a year, a blood count once in two or three months being the only other expenditure. Venesection by any method requires some expensive equipment. The various methods of roentgen therapy are still expensive by comparison with drug treatment. Radioactive phosphorus costs, if available at all, about $6 or $7 a millicurie, and most patients treated receive 30 or more millicuries in a year.

Carbohydrate Metabolism in Osteoporosis and Paget's Disease.—Moehlig and Abbott say that osteoporosis and Paget's disease may occur in the same family. The pathologic process is at one stage the same (osteoporosis) in the two diseases and there is a similar lowered dextrose tolerance in both diseases. The main difference is that in osteoporosis the disease process is an atrophic or destructive one, whereas in Paget's disease it proceeds to the hypertrophic state. Observations on 94 cases of osteoporosis and 40 of Paget's disease revealed that of 40 patients of the osteoporosis group who had dextrose tolerance tests 35 showed a diabetic type of curve and 5 were normal or had an increased tolerance. In the Paget's disease group 31 tolerance tests were made; 27 showed a diabetic type of curve and 4 were normal or had an increased tolerance. A familial history of diabetes was obtained in 33 of 94 cases of the osteoporosis group. In the Paget's disease group of 40 cases, 13 gave a familial history of diabetes. About 12 per cent of both groups of patients had an increased dextrose tolerance which was probably due to the administration of calcium or vitamin D or both. Since arteriosclerosis almost invariably accompanies both osteoporosis and Paget's disease, the administration of calcium and vitamin D are contraindicated. The same is true of cod liver oil, halibut liver oil and related compounds. Dextrose tolerance studies are a great aid in the diagnosis of osteoporosis, and Paget's disease and studies of carbohydrate metabolism will probably prove of value in determining the etiology.

New England Journal of Medicine, Boston

234:573-616 (May 2) 1946

*Low Sodium Diet and Free Fluid Intake in Treatment of Congestive Heart Failure: Preliminary Report. W. C. Bridges, E. O. Wheeler and P. D. White.—p. 573.
*Alcohol in Treatment of Angina Pectoris. S. Stearns, J. E. F. Riseman and W. Gray.—p. 578.
Spontaneous Hematoma of Abdominal Wall in Pregnancy: Report of Case. D. Rose.—p. 582.
Research in Physical Medicine. A. L. Watkins.—p. 584.
Acute Fibrinous Pericarditis.—p. 608.
Massive Bilateral Pulmonary Embolism.—p. 610.

Low Sodium Diet and Free Fluid Intake in Congestive Heart Failure.—Bridges and his associates say that the custom of advising a low fluid and low salt intake for congestive heart failure has during the past year given way to the far more successful application of a low sodium and free fluid intake. The secret of the success of this treatment is not merely to give a so-called low salt diet, which may contain anywhere from 3 to 6 Gm. of sodium chloride, but to give as little as 2 Gm. or even less. This in turn allows one to permit free intake of fluids for the relief not only of edema but also of thirst. The authors have studied the effect of the low sodium diet on 64 patients. Seventeen patients obtained much help, 15 moderate benefit, 8 slight benefit and 7 no benefit. Either the remaining 17 patients were uncooperative or insufficient data are available. The restriction of sodium equivalent to 1.75 or 2.63 Gm. of sodium chloride per day is helpful in the control of certain cases of congestive heart failure in which digitalis and mercurial diuretics are ineffective or not entirely satisfactory. This regimen does not replace rest, digitalis and diuretic therapy but is a valuable adjunct to the treatment of obstinate congestive failure.

Alcohol in Treatment of Angina Pectoris.—According to Stearns and his associates, alcoholic beverages have frequently been recommended or at least permitted in the treatment of angina pectoris. They review observations on 19 men and 2 women who had had angina pectoris for from six months to fifteen years. Each patient had been a regular weekly visitor to the angina pectoris clinic of the Beth Israel Hospital for

months or years, during which time the response to a wide variety of medicaments, including glyceryl trinitrate, had been determined. In 8 patients the comparative duration of induced attacks of angina pectoris when the patients were untreated and when they were treated by the ingestion of 1 ounce of whisky immediately at the onset of the attack was repeatedly measured. The amount of work that could be performed before pain was precipitated was determined in 21 patients at varying intervals up to ninety minutes after a single 1 ounce dose of whisky, and this was compared with the usual performance of the patient while on ineffective or placebo medication. The amount of work that could be performed before pain was precipitated was determined on 9 patients who had taken 1 ounce of whisky four times daily for one week, including the morning of the test. To demonstrate a possible reflex effect of alcohol, the amount of work required to precipitate pain was determined on 8 patients who exercised while holding ½ ounce of whisky in the mouth. Therapeutic doses of whisky do not measurably shorten the duration of attacks of angina pectoris or increase the capacity of the patient with angina for work. In many patients with angina pectoris whisky may promote an increased sense of well-being without associated objective improvement. A few patients are made subjectively worse.

New Jersey Medical Society Journal, Trenton

43:167-220 (May) 1946

Medical Society of New Jersey Annual Reports to House of Delegates, May 21-23, 1946. S. Alexander.—p. 179.

43:221-264 (June) 1946

Clinical Uses of Various Insulins. B. Saslow.—p. 224.
Effect of Hesperidin and Ascorbic Acid on Capillary Fragility in Rheumatoid Arthritis: Preliminary Report. P. J. Warter, H. L. Drezner and S. Horoschak.—p. 228.

North Carolina Medical Journal, Winston-Salem

7:197-240 (May) 1946

President's Address. O. Moore.—p. 197.
Further Studies on Estrogen-Progesterone Treatment of Habitual Abortion. N. W. Vaux and A. E. Rakoff.—p. 202.
Readjustment Problems of Discharged Soldier. E. F. Walker.—p. 209.
Hematuria. D. Gomberg.—p. 213.
Chronic Hypoplastic Anemia of Newborn: Report of Case with Apparent Recovery. J. H. Fitzgerald Jr. and A. H. London Jr.—p. 215.
Prepayment Health Service Plans for Farm Security Administration Borrowers in North Carolina. V. E. Swift.—p. 217.

7:241-284 (June) 1946

Present Status of Proposals for Medical Care in North Carolina. P. F. Whitaker.—p. 241.
Commencement Address. P. R. Hawley.—p. 246.
Difficulties in Diagnosis and Treatment of Pinworm Infection. W. N. Sisk.—p. 250.
Spirochetal Jaundice (Weil's Disease) in North Carolina: Report of 2 Cases Found at Postmortem Examination. W. C. Thomas and P. C. Stringfield.—p. 254.
Management of Acute Psychiatric Cases in General Practice. D. A. Young.—p. 256.
Caudal Analgesia. K. E. Neese.—p. 258.

Pennsylvania Medical Journal, Harrisburg

49:817-936 (May) 1946

Skin Diseases Due to Vitamin Deficiencies. E. Urbach.—p. 833.
Nasal Injuries and Their Implications. M. S. Ersner.—p. 840.
Urologic Conditions Associated with Pain in Right Lower Quadrant. W. W. Baker.—p. 845.
Ocular Tumors in Rural Practice. J. K. Covey.—p. 853.
Treatment of Macrocytic Anemia with Synthetic L. Casei Factor (Folic Acid): Case Report. G. O. Favorite.—p. 855.
New Truss for Inguinal Hernia in Infant. G. W. Truitt.—p. 858.

49:937-1064 (June) 1946

Ten Year Survey of Ectopic Pregnancy. R. C. Nucci.—p. 953.
Pudendal Nerve Block in Obstetrics (Perineal Field Block). J. R. Eisaman and T. McHenry.—p. 964.
Contact Dermatitis from Morphine: Series of Cases Among Workers in a Drug Factory. E. F. Corson and G. P. Rouse Jr.—p. 968.
Deodorants—Facts and Fallacies. L. Hollander.—p. 971.
Speech Pathology as Managed in a Children's Hospital. W. P. Jenkins. —p. 977.
Treatment of Urinary Tract Infections. W. P. Herbst.—p. 982.
Basic Requirements of Department of Clinical Pathology in Modern Hospital. Committee on Laboratories of the Medical Society of the State of Pennsylvania.—p. 985.

Psychoanalytic Quarterly, Albany, N. Y.

15:139-278 (April) 1946

On Acting. O. Fenichel.—p. 144.
Genesis of Reality Testing: General Theory of Hallucination. A. Garma. —p. 161.
Dreams and Acting Out. R. Sterba.—p. 175.
Unconscious Factors in Group Therapy. Geraldine Pederson-Krag. —p. 180.
Psychology of Time Perception. E. Bergler and G. Róheim.—p. 190.

Radiology, Syracuse, N. Y.

46:441-546 (May) 1946

*Value of Orchiectomy in Treatment of Carcinoma of Male Breast. T. Leucutia.—p. 441.
*Problem of Secondary Infection in Carcinoma of Cervix. M. Garcia and J. V. Schlosser.—p. 448.
Indications and Limitations of Transvaginal Roentgen Therapy for Cancer of Cervix. A. W. Erskine.—p. 458.
Roentgen Diagnosis of Knee Joint Effusion. A. L. Bachman.—p. 462.
Extrapleural Pneumothorax in Treatment of Pulmonary Tuberculosis: Three Year to Five Year Follow-Up of 48 Cases. F. H. Alley—p. 470.
So-Called Retarded or Occult Fractures: Significance of Parallel Projection in Roentgen Diagnosis of Fractures. B. J. Toth.—p. 475.
Comparative Clinical Investigation of Cholecystographic Preparations. G. A. Unfug.—p. 489.
March Fracture. R. E. Van Demark and P. V. McCarthy.—p. 496.
Hiatus Hernia of Stomach as Source of Gastrointestinal Bleeding. E. A. Mendelsohn.—p. 502.
Lymphoblastoma of Kidney. S. E. Freifeld.—p. 507.
Paragonimus Westermanii: Case Report. T. H. Brem and H. A. Cohn. —p. 511.
Two Cases of Spinal Anomaly, Best Demonstrated by Laminagraphy. J. H. Gilmore, R. C. Stauffer and L. G. Jacobs.—p. 514.
Spontaneous Renocolic Fistula: Report of Case. J. E. Miller.—p. 518.

Orchiectomy in Carcinoma of Male Breast.—Leucutia presents the histories of 2 men aged 68 and 67 respectively, both of whom had carcinoma of the breast. Orchiectomy was performed when the carcinoma was in an advanced stage. In the first case the carcinoma dated back to 1933. Radical mastectomy and repeated series of high voltage roentgen therapy led to a satisfactory result until the summer of 1942, when general osseous metastases developed. In October 1942 a bilateral orchiectomy was done. Within a few weeks there was a spectacular improvement, and the metastases completely disappeared in a few months. Nearly two years later the patient is in good condition and apparently free from carcinoma. In the second case the carcinoma appeared in the late fall of 1942. A radical mastectomy followed by four series of high voltage roentgen therapy failed to prevent local recurrence, which assumed the character of cancer en cuirasse. There were also signs of beginning metastases in the liver, but there was no invasion of the osseous system. In January 1944 a bilateral orchiectomy was done and there was a remarkable improvement, with a 20 pound (9 Kg.) weight gain. In June 1944, however, extensive local recurrence developed as well as widespread visceral metastases, and at the end of August 1944 the patient died.

Secondary Infection of Carcinoma of Cervix.—According to Garcia and Schlosser, febrile reactions are a familiar feature in cases of carcinoma of the cervix. They are due to the bacterial infection and not to the absorption of toxic products from the neoplasm. The authors determined the incidence and severity of infection in 449 cases of carcinoma of the cervix treated at the New Orleans Charity Hospital. They included in the infected class 141 (31 per cent) of the patients who had repeated elevations of temperature to 101 F. or more, in most instances with a rapid sedimentation time or leukocytosis or both, attributable to bacterial infection in the cervical tumor or lesions secondary to it. Pelvic cellulitis accounted for the majority of the infectious complications; it includes a variety of clinical states ranging in severity between cervical suppuration and pelvic peritonitis. Some subside spontaneously, but occasionally chronic sepsis and death result. Fatalities occur more often from the less frequent types of infection listed. Among these peritonitis takes first rank. More than 40 per cent of the infectious complication occurred before treatment. All the urinary complications were present prior to radiation. They form an integral part of the evolution of the neoplasm, resulting from ureteral obstruction due to tumor infiltration of the parametria. The lesions in the urinary tract included pyelitis, pyelonephritis and pyonephrosis. Once severe infection is established, surgical drainage of pus collections and

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chemotherapy seem to be the only efficacious methods. The sulfonamides can produce an almost miraculous recovery. Penicillin has been used since 1944 in 20 cases. Penicillin is an important additional weapon in combating the infection associated with carcinoma of the cervix.

Review of Gastroenterology, New York

13:155-266 (May-June) 1946

Diverticulosis and Diverticulitis of Colon. A. Galambos and Wilhelmina Mittelmann-Galambos.—p. 171.
Influence of Vitamins and Hormones in Prevention of Experimental Cinchophen Peptic Ulcer. J. Nasio.—p. 195.
Dietotherapy in Gastrointestinal Diseases. E. Foldes.—p. 205.
Enema: Historical Notes. W. Lieberman.—p. 215.
Relationship Between Uremia and Peptic Ulcer. H. L. Bolen.—p. 229.

South Carolina Medical Assn. Journal, Florence

42:111-146 (May) 1946

Chronic Disease of Breast. K. M. Lynch.—p. 111.
Helpful Considerations in Diagnosis of Surgical Cases of Jaundice. M. L. Mathias.—p. 115.
Disabilities of Foot. F. A. Hoshall.—p. 117.

42:147-182 (June) 1946

Address. J. McLeod.—p. 147.
Rheumatic Fever Program in South Carolina. M. W. Beach, B. O. Ravenel, J. A. Boone and others.—p. 150.

Southern Medical Journal, Birmingham, Ala.

39:445-526 (June) 1946

Carcinoma of Fundus Uteri. R. J. Crossen.—p. 445.
*Periarteritis Nodosa: Clinical Manifestations and Postmortem Findings, with Report of 6 Cases. W. H. Higgins.—p. 453.
*Effect of Transthoracic Vagotomy on Functions of Stomach and on Early Clinical Course of Patients with Peptic Ulcer. K. S. Grimson, H. M. Taylor, J. C. Trent, D. A. Wilson and H. C. Hill.—p. 460.
Use of Perforated Acrylic Implants Following Enucleation. G. M. Haik.—p. 473.
Failure of Lipid Metabolism: Proctologic Significance. M. M. Marks.—p. 477.
Primary and Secondary Metastases from Cancer of Colon and Rectum. W. H. Daniel.—p. 480.
*Use of Neostigmine (Prostigmine) in Subacute Poliomyelitis. C. J. Frankel and R. V. Funsten.—p. 482.
Importance of Vitamins of B Complex in Clinical Medicine. Grace A. Goldsmith.—p. 485.
North Carolina School Health Coordinating Service. E. H. Ellinwood and W. P. Jacocks.—p. 493.
Some Future Problems in Allergy. F. M. Rackemann.—p. 497.
The Disabled, the Physician and Employment. H. A. Rusk.—p. 501.
Industrial Health: Report from the Field. C. M. Peterson.—p. 507.
Common Skin Diseases in Children. L. Bivings.—p. 511.
Premeasles Encephalitis. J. M. Arena.—p. 513.
Experiments in Medical Education and Medical Care in New Medical School. C. C. Carpenter.—p. 515.

Periarteritis Nodosa.—Higgins reports 6 fatal cases of periarteritis nodosa. The patients (4 men between the ages of 31 and 55 and 2 women both aged 32) for several months had been suffering from loss of weight, weakness, generalized pain in the joints and the abdomen, swelling of the ankles, dyspnea and anemia. There were some neurologic manifestations such as optic atrophy, numbness of the extremities and weakness of one or more groups of muscles. The patients showed evidences of cardiovascular renal disease and temperature variations over a long period. There was anemia, leukocytosis and eosinophilia. Three of the patients had spinal fluid pressures of over 200 mm. of water, 1 gave a history of recurring convulsions and 2 others developed mild delirium. All the patients died and necropsy indicated that all structures may be involved; the incidence of the most commonly affected organs is kidneys 80 per cent, heart 70 per cent, liver 65 per cent, muscles 30 per cent and the central nervous system 8 per cent. Mesenteric vessels and adrenal glands showed typical vascular changes. There were 2 fatal intestinal perforations and 1 hemorrhage from a liver aneurysm. Periarteritis nodosa presents a multiplicity of pathologic and clinical manifestations and should be considered as a possibility in every patient with obscure or generalized symptoms.

Transthoracic Vagotomy for Peptic Ulcer.—Grimson and his associates employed vagotomy in the treatment of 25 patients with refractory peptic ulcer. The patients were between the ages of 27 and 62 years. Ulcer symptoms had been present from three to thirty-five years before vagotomy. Supradiaphragmatic transthoracic vagotomy was performed through the eighth or ninth rib bed; 10 cm. of each vagus nerve trunk was excised and the plexus of nerves about the lower esophagus was dissected free and excised or evulsed. Vagotomy has been combined with pyloroplasty or gastrojejunostomy in 5 of the patients because of obstruction and retention. Eighteen of the patients have been followed four to eighteen months since operation. All ulcers have healed and there has as yet been no evidence of recurrence. Ulcer pain was relieved by the time the patient waked from anesthesia. The motility of the fasting and of the barium filled stomach was decreased and so was the volume and acidity of the secretion of the fasting stomach. These results suggest that although vagotomy should block the neurogenic, psychogenic or reflex gastric secretory mechanism it may also somewhat alter the endocrine or chemical secretory mechanism or facilitate neutralization of the free acid that it produces. Since the decrease of acidity was least in 5 of those patients who had the most obstruction by scar tissue and the greatest delay in emptying of the stomach, it seems probable that vagotomy should often be combined with pyloroplasty or gastrojejunostomy if the maximum benefit is to be obtained.

Neostigmine in Poliomyelitis.—Frankel and Funsten report 58 cases of subacute poliomyelitis occurring between the ages of 6 months and 42 years. All the patients showed variable amounts of muscle spasm, 8 presented pronounced incoordination and 4 moderate incoordination. Eight patients had developed contractures or conditions in which joints could not be moved without undue force or pain. Oral administration of neostigmine bromide was disappointing and was discontinued. Neostigmine methylsulfate given subcutaneously in doses of 1.5 to 2 mg. for adults and 0.5 to 1 mg. for children proved effective. Forty-six patients (80 per cent) showed improvement to normal ranges of passive motion in from three to eighteen weeks of treatment. Seventeen patients (30 per cent) showed dramatic improvement in from one to four days. Twelve patients (20 per cent) showed little or no improvement. Twenty-three patients showed good results only after treatment was interrupted for from five to seven days and then repeated. All patients with muscle incoordination were definitely improved. None of the patients developed permanent contractures. The patients became ambulatory more rapidly and the hospitalization period could be cut down. The return of active muscle power did not seem to be influenced by the drug. It can and probably should be combined with modified hot pack therapy.

Union Médicale du Canada, Montreal

75:633-756 (June) 1946

Cholesterol and Cataract: Physicochemical Pathology of Crystalline Lens. H. Pichette.—p. 647.
Myxedema and Myotonia. R. Amyot.—p. 654.
Early Treatment of Acute Anterior Poliomyelitis with Iodo-Benzo-Methylate Hexamethylenetetramine and Sodium Salicylate. J. H. Charbonneau.—p. 663.
*Obstinate Cases of Dysmenorrhea and Surgical Removal of Superior Hypogastric Plexus. P. A. Poliquin.—p. 671.

Sympathectomy for Obstinate Cases of Dysmenorrhea.—Poliquin removed the superior hypogastric plexus in 120 young unmarried women with essential or functional dysmenorrhea by using Cotte's technic. Follow-up of 84 cases revealed a definite cure in 62 cases (75 per cent); 8 patients presented a 60 per cent improvement with pain alleviated considerably, requiring only the occasional use of mild sedatives; 7 patients considered their dysmenorrhea improved and pain tolerable with the constant use of mild sedatives; 7 cases were failures. In the series of cures the pain disappeared with the first postoperative menstruation except for 5 cases, in which it subsided within three to five months. In none of these cases did the pain recur. In addition there was pronounced improvement in the general condition of the patients and particularly of those with disturbances in personality. Failures have resulted in cases in which the removal of the plexus had not been radical enough, some of the nerve bundles being left or a segment of less than 4 to 6 cm. in length being removed. Sympathectomy can be substituted for other more mutilating but ineffective operations for functional dysmenorrhea.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Radiology, London

19:173-216 (May) 1946

Significance of Minor Bone Injuries. H. W. Gillespie.—p. 173.
Pulmonary Oil Embolism. Maria E. Grossmann.—p. 178.
Cancer in Childhood. I. G. Williams.—p. 182.
Case of Sarcoma of Bone Treated by Radiotherapy. G. Hilton and L. E. Glynn.—p. 198.
Cutting Punch Biopsy Forceps. J. Walter.—p. 203.
Inactivation of Viruses by Radiations. D. E. Lea.—p. 205.
Condenser Chamber Measuring Apparatus. F. W. Spiers and G. A. Hay. —p. 213.

British Medical Journal, London

1:787-824 (May 25) 1946

Progress After Perforated Peptic Ulcer. C. F. W. Illingworth, L. D. W. Scott and R. A. Jamieson.—p. 787.
One Hundred Cases of Perforated Peptic Ulcer: Analysis of Immediate and Remote Results of Simple Closure. F. Forty.—p. 790.
Prognosis of Immaturity. C. Asher.—p. 793.
Treatment of Mustard Gas Burns. W. Clayton, A. J. Howard and D. Thomson.—p. 797.
Volvulus of Small Intestine. W. G. Kerr and W. H. Kirkaldy-Willis. —p. 799.

Edinburgh Medical Journal

53:145-208 (April) 1946

Health and Welfare of Merchant Seaman. J. A. Nixon.—p. 145.
Dysphagia Due to Causes Other Than Malignant Disease. A. S. Johnstone.—p. 160.
Experiences of Otologist on Active Service. J. P. Stewart.—p. 173.
Meningococcemia: Part I. Three Cases and Historical Review. W. R. Logan.—p. 183.
Id.: Part II. Clinical Review. W. R. Logan.—p. 189.

Journal of Endocrinology, London

4:371-438 (April) 1946

Enterohepatic Circulation of Estrogens. F. E. Emery and H. E. Joyce. —p. 371.
Factors Affecting Absorption Rate of Subcutaneously Implanted Hormone Tablets. A. T. Cowie and S. J. Folley.—p. 375.
Factors Affecting Absorption from Implanted Tablets. A. S. Parkes. —p. 386.
Functional Relation Between Uterus and Corpus Luteum. J. P. Chu, C. C. Lee and S. S. You.—p. 392.
Logistic Dose Response Curves: Theoretical Approach. A. C. Bottomley. —p. 399.
Fertilization of Eggs in Hypophysectomized Rats. I. W. Rowlands and P. C. Williams.—p. 417.
Further Observations on Formation of "Ghosts" in Subcutaneously Implanted Tablets. R. Deanesly, S. J. Folley and A. S. Parkes. —p. 422.
Relation Between Iodine Content and Biologic Activity of Thyroid Preparations. A. S. Parkes.—p. 426.
Gonad Stimulation by Androgens in Hypophysectomized Pigeons. J. P. Chu and S. S. You.—p. 431.

Journal of Hygiene, London

44:307-420 (May) 1946. **Partial Index**

Experimental Study on Cellular Immunity in Pasteurella Pestis Infection. S. S. Bhatnagar and D. L. Shrivastava.—p. 307.
Natural Ventilation of Unheated "Closed Rooms." J. B. Carne.—p. 314.
Methods of Measuring Ventilation. O. M. Lidwell and J. E. Lovelock. —p. 326.
Bactericidal Effects of Partial Irradiation of Room with Ultraviolet Light. O. M. Lidwell.—p. 333.
*Localized Outbreak of Salmonella Food Poisoning Apparently Transmitted by a Hen's Egg. M. Crowe.—p. 342.
Critical Examination of Organism Described as Bacillus Wakefield. R. F. Bridges and Joan Taylor.—p. 346.
Incidence of Natural Diphtheria Antitoxin in Horses: Its Influence on Results of Antigenic Stimulus. P. N. Basu and R. N. Roy. —p. 348.
Epidemic Curve for Mumps. P. Heiberg and H. Petersen.—p. 350.

Salmonella Food Poisoning.—Crowe describes an outbreak of aertrycke food poisoning the vehicle for which was artificial buttter and the source an infected egg. A method for extending butter rations had been in vogue in the locality for some time. The process entailed making a suspension of cornflour and milk, bringing this to a boil, next adding a quantity of butter and then a raw egg and finally whipping the ingredients together. Mrs. A, employing this technic, made a supply for the use of her family. After finishing she did the same for her niece, Mrs. B. The two mixtures were made, one after the other, in the same bowl and "whipped" with the same fork. The outbreak was characterized by a dramatic onset and an almost familial localization. Twenty-three of the 27 persons at risk were affected. All the patients eventually recovered. Although somewhat unusual, aertrycke disease in human beings has on a number of occasions been caused by duck's eggs. This outbreak, however, was caused by a hen's egg, a source which has not been previously described.

Journal of Laryngology and Otology, London

60:389-424 (Oct.) 1945

Corrosive Injuries of Esophagus, With Particular Reference to Treatment of Acute Corrosive Esophagitis. T. Leegaard.—p. 389.
Series of Laryngeal Injuries, with Description of Endolaryngeal Burns. A. J. Moffett.—p. 415.

Lancet, London

1:721-760 (May 18) 1946

Orthopedic and Rehabilitation Service of Royal Air Force. H. O. Clarke.—p. 721.
Lipodystrophy and Hepatomegaly with Diabetes, Lipemia and Other Metabolic Disturbances: Case Throwing New Light on Action of Insulin. R. D. Lawrence.—p. 724.
*Aminothiazole in Treatment of Thyrotoxicosis. M. Perrault and D. Bovet.—p. 731.
Nutritional Neuropathy in Prisoners of War and Internees from Hong-Kong. C. A. Clarke and I. B. Sneddon.—p. 734.
Tolerance to Octyl Nitrite in Achalasia of Cardia: Report of Case. T. Robson and R. S. Wilkinson.—p. 737.

1:761-804 (May 25) 1946

Medical Administration as Career. J. M. Mackintosh.—p. 761.
Acute Benign Dry Pleurisy in Middle East. J. G. Scadding.—p. 763.
Clinical Trials of Kemithal. R. R. Macintosh and R. D. Scott.—p. 767.
Clinical Investigation of Kemithal. R. A. Gordon and A. K. Gibbons. —p. 768.
Kemithal Anesthesia in Thoracic Operations. J. Halton.—p. 771.
Lipodystrophy and Hepatomegaly with Diabetes, Lipemia and Other Metabolic Disturbances: Case Throwing New Light on Action of Insulin. R. D. Lawrence.—p. 773.
Epidemic Epididymo-Orchitis in Malta. R. E. Tunbridge and C. J. Gavey.—p. 775.
Nonspecific Epididymitis. R. S. Handley.—p. 779.
Hyperplasia of Seminal Vesicle Causing Enuresis. J. T. Chesterman. —p. 781.

Aminothiazole in Thyrotoxicosis.—Perrault and Bovet state that Jeantet of Lyons in 1943 observed unusual goiters in workmen employed in the extraction of aminothiazole, which is used for the preparation of sulfathiazole. Not one of the men so affected complained of disorders; they showed no signs of thyrotoxicosis, and their basal metabolism was reduced. One employee who previously had a mild thyrotoxicosis found that his symptoms disappeared and his general condition improved. This chance observation indicated that aminothiazole could lead to the formation of a goiter while reducing thyroid activity. From their clinical experience in 129 cases the authors conclude that aminothiazole is highly efficacious and well tolerated. It is superior to other substances previously recommended, such as thiourea and thiouracil, which have therapeutic value but are not well tolerated. Aminothiazole can be used in the preoperative treatment and alone in the treatment of recent or mild cases. In other cases it will bring about a balance equivalent to functional cure.

Medical Journal of Australia, Sydney

1:609-644 (May 4) 1946

Changing Face of Medical Practice in Tasmania. G. M. W. Clemons. —p. 609.
Experimental Observations on Aural Effects of Gunblast. N. E. Murray and G. Reid.—p. 611.
Value of Biochemical Tests in Interpretation of Jaundice. A. B. Corkill, Dorothy J. Pollock and G. E. Smith.—p. 617.
Medical Rehabilitation: Its Organization in Royal Air Force and Royal Australian Air Force. G. G. Burniston.—p. 620.
*Resistance of Hemophilus Influenzae to Action of Penicillin, with Special Reference to Type B Strains. E. A. North, H. Wilson and G. Anderson.—p. 626.
Trocar and Cannula for Intravenous Administration of Fluids. R. V. Pratt.—p. 629.

Resistance of Hemophilus Influenzae to Penicillin.—North and his associates found that laboratory tests on 55 strains of Hemophilus influenzae (51 from the cerebrospinal fluid of patients with influenzal meningitis) show that all are

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highly resistant compared with a standard penicillin sensitive staphylococcus. Hemophilus influenzae does not produce a penicillinase. Clinical and laboratory evidence does not suggest that penicillin is a satisfactory substitute for specific rabbit antiserum in the treatment of influenzal meningitis.

Schweizerische medizinische Wochenschrift, Basel

76:237-260 (March 23) 1946

*Leptospirosis Pomona, Swineherd's Disease. O. Gsell.—p. 237.
Electrophoretic Experiments on Serum and Plasma. E. Wiedemann. —p. 241.
Electrophoretic Investigations in Nephrotic Syndrome and Hepatic Cirrhosis and Their Clinical Significance. F. Wuhrmann and C. Wunderly.—p. 251.
Technic of Operation for Pericarditis Calculosa. D. M. Juzbašić. —p. 256.

Leptospirosis Pomona.—According to Gsell, swineherd's disease has a biphasic fever curve. A primary fever period of from four to six days' duration is followed by a nonfebrile period of two or three days and this in turn is followed by a short fever period during which the patient presents the aspects of a serous meningitis. Clinical signs of meningism may be present during the first fever period. The disease is seen mostly in young men who come in contact with hogs or with hog excrements. It is observed mostly in the western Alps, particularly in Savoy, Switzerland and northern Italy. More than 50 cases of swineherd's disease have been observed in the region of St. Gallen, where hog raising farms are often conducted in connection with dairies and cheese factories. Whereas originally it was assumed that the disease was of virus origin, in 1944 evidence was presented that it is a leptospiral disease. During the second week of the disease leptospiral agglutinins become demonstrable in the serum of patients, and the titer increases in the course of the next two months. The blood and cerebrospinal fluid are infectious during the first week. Leptospiras have been cultured from the blood during the first four days of the disease. Hogs from establishments in which swineherd's disease had been observed were found to have high agglutination titers for Leptospira pomona, whereas blood samples from hogs in regions where the disease does not occur are entirely negative in this respect. The leptospiral infection causes no symptoms in hogs. Artificial infection of hogs with L. pomona caused no symptoms but did produce positive blood culture and serum agglutination. Leptospirosis pomona occurs in different parts of the world, particularly where there exist close contacts between swine and man. It seems to depend on such contact as leptospirosis icterogenes depends on the contact of rat and man, Leptospira canicola on dog and man and Leptospira grippotyphosa on the contact of mouse and man.

Hospital, Rio de Janeiro

29:491-666 (April) 1946. **Partial Index**

*Late Biochemical Variations of Shigella Alkalescens Types I and II. A. de Assis.—p. 491.
*Surgical Treatment of Pain of Trigeminal Nerve: Retrogasserian Neurotomy by Temporal Intradural Route. J. Ribe Portugal.—p. 501.
Importance of Atelectasis in Pulmonary Tuberculosis. V. Souto.—p. 563.
Uterine and Vaginal Alterations in Rats with E Avitaminosis; Pigmentation of These Organs: I. Physiopathology. D. de Oliveira.—p. 573. Id.: II. Pathologic Anatomy. J. Lopes de Faria.—p. 583.
Adnexitis. N. Falci.—p. 611.
Present Concept of Laennec's Cirrhosis. W. Rangel.—p. 621.
Treatment of Cancer of Uterus. C. Prado.—p. 633.

Late Biochemical Variations of Shigella Alkalescens.—Six strains of Shigella alkalescens which had been tested on carbohydrates in 1939 were retested by de Assis in 1946 on sucrose, rhamnose, dulcitol and salicin. No change occurred as to sucrose, rhamnose and dulcitol fermentations. Salicin has now been attacked by three strains which were salicin negative in 1939. All these strains belonged to the serologic type I of Sh. alkalescens and kept the same antigenic structure in 1946, according to cross agglutination and absorption tests performed with organisms taken from salicin positive cultures. In 1939 only one culture did not produce acid from xylose, and it belonged to the serologic type II of Sh. alkalescens. In 1946 it became xylose positive while continuing to agglutinate only with type II antiserum. Late biochemical variation seems also to occur in some strains of Sh. alkalescens, which should be taken into consideration in establishing characteristics of that species and its types. The author shows that no consistent objection seems to remain against the interpretation of the alkali-producing Shigellae (Sh. alkalescens) as a serologically heterogeneous group of bacteria, which may be divided into at least four antigenic types without regard to their fermentation abilities. Since the stability of these antigenic types is greater than the usual fermentation tests, it seems desirable that a purely serologic basis might be laid down for classifying Sh. alkalescens cultures.

Trigeminal Nerve Surgery.—Ribe Portugal divides surgical interventions on the trigeminal nerve into 4 groups of operations: those on (1) the peripheral branches, (2) the gasserian ganglion, (3) the dorsal roots and (4) the cerebral trunk. He describes his incision giving access to the trigeminal nerve at the pons varolii. He explains his technic for sectioning the trigeminal nerve by the temporal intradural route, that is, by opening the dura elevating the temporal lobe and opening Meckel's cavity or sectioning the tentorium. He prefers the opening of Meckel's cavity because the tentorium supports the cerebrum. Both operative procedures are easy, avoiding traumatism of the gasserian ganglion and not provoking bleeding. He presents 20 illustrative case histories from among the 118 cases in which he sectioned the trigeminal root by the temporal and subtentorial approach.

Nordisk Medicin, Gothenburg

29:365-420 (Feb. 22) 1946

Physiologic Points of View Concerning Ulcer. G. Kahlson.—p. 365.
*Medical Treatment of Gastric and Duodenal Ulcer. B. J. E. Ihre. —p. 367.
Surgical Treatment of Gastric and Duodenal Ulcer. E. Perman.—p. 373.

Hospitalstidende

Gastric Polyposis, Review and Case. O. Nørgaard.—p. 381.

Hygiea

Anomaly in Arterial Supply of Liver. Jan-Egon Tengberg and V. Hanzen.—p. 401.

Medical Treatment of Peptic Ulcer.—Ihre states that examination of the gastric secretion with histamine and continuous aspiration in 264 ulcer cases showed hypersecretion in 39 per cent of the cases, more often in men than in women, more often in duodenal than in gastric ulcer, equally often in duodenal ulcer of brief and of longer duration. X-ray examination of the stomach does not afford reliable information as to hypersecretion. The indications for blood transfusion have been widened. In anemia and hypoproteinemia healing of the ulcer is retarded. When the hemoglobin value is below 60 per cent, transfusion is indicated. Prompt correction of the anemia is particularly important in older patients. The treatment is supplemented with iron and vitamin C. When massive gastrointestinal hemorrhage occurs with symptoms of acute collapse and fall of blood pressure, transfusion of 800 to 1,200 cc. should be given, followed immediately by x-ray examination of the esophagus, stomach and bulb to find the source of the bleeding. In repeated massive hemorrhage, when a typical ulcer niche has been demonstrated and the patient is over 40, blood transfusion and immediate operation are indicated. The degree of deformity, particularly of the bulb, is more important in prognosis than the size of the niche. Hourglass bulb is a relative indication for operation. In chronic gastric ulcers the indications for operation are considerably wider than in chronic duodenal ulcer because of the greater tendency to malignant degeneration. The absence of symptoms during and after treatment and even reduction of the niche during treatment do not exclude malignant degeneration. The importance is stressed of satisfactory early internal treatment continued sufficiently long to attain healing (x-ray control after treatment) and of after-treatment with attention not only to diet but to etiologic factors of the psychic, social and economic kind. A schedule of regular and frequent meals, eventually supplemented with antacids, sedatives and antispasmodics, should be followed for at least a year in cases in which there is healing with no or little deformity, for three years in other cases.

Book Notices

A Textbook of Bacteriology and Immunology. By Joseph M. Dougherty, A.B., M.A., Ph.D., Dean of the School of Science and Professor of Bacteriology, Villanova College, Villanova, Pennsylvania, and Anthony J. Lamberti, B.S., M.S. Cloth. Price, $4.50. Pp. 360, with 102 illustrations. St. Louis: C. V. Mosby Company, 1946.

The authors have attempted to achieve several purposes in this textbook. It is written for "premedical students, predental students and students preparing to teach the biological sciences." Further, in an introduction by John A. Kolmer it is indicated that the book is adapted for use in pretechnological instruction in bacteriology and for use in nurses' training schools. Perhaps a textbook of bacteriology at the truly fundamental level could accomplish all this within a single cover. Unfortunately this book is made up in large part of a simplification of pathogenic bacteriology and of laboratory methods rather than a presentation of the broad fundamental aspects of bacteriology. In fact, the authors state in the preface that "an effort has been made, throughout the text, to simplify the various phases of bacteriology and immunology for the purpose of securing the interest and enthusiasm of the average student." And again "The intensive development of the sciences in our day, together with the limited time at the disposal of professional students, more than justifies the effort to familiarize the preprofessional student with the terminology and the principles of bacteriology." Many teachers of science would use the same observation (intensive development of the sciences and limited time of the student) as a powerful argument for more emphasis on fundamental principles rather than attempting to overcome the difficulties by an oversimplification of details and an early familiarization of the student with terms. It is high time teachers of bacteriology presented their subject as an important section of biology in its own right and not only in its applications to other branches of science.

The first chapter, on the history of bacteriology, is thorough and well done in the customary style, bringing the story up to the end of the Pasteur-Ehrlich era. The second chapter consists of a commendable effort to introduce the student to the fundamentals of microscopy, a subject often insufficiently treated for students of bacteriology. With the exception of chapter 11, which outlines in great detail the method of deriving a desired dilution of a reagent from stock solutions, and chapter 15, which treats the fundamental methods of hematology, the remainder of the book is given over to the customary type of presentation of bacteriology and immunology. In the latter category much emphasis has been placed on the details of serologic methods. There is one short chapter on fungi and a rather extensive one on parasitic protozoa.

Throughout the book there is a surprising conservatism in the reluctance of the authors to make use of material which has become part of our body of knowledge during the last ten to fifteen years or longer. For instance, nothing is said concerning sylvatic plague except that the ground squirrel of the West is regarded as a potential reservoir of plague, murine typhus is omitted entirely, nothing is said concerning the Lancefield grouping or the Griffith typing of hemolytic streptococci, "type IV" pneumococci is used to designate the old group IV and the discussion of this topic is not carried beyond mention of the contributions of Cooper in 1929 and 1932.

Perhaps the most serious omission in a book purported to deal with fundamentals is the complete absence of a discussion of the metabolism of the heterotrophs. The complete omission of any mention of the genus Hemophilus is noteworthy in a book treating all the other usual genera of pathogens. There are some misstatements of fact, such as the indication on page 72 that starch is a trisaccharide.

The most serious criticism, however, is the authors' misconception of the fundamental principles of bacteriology. Unfortunately, the discerning teacher will not recommend this book as a sound basis for introductory work in the subject.

Health Care of the Family. By Ramona L. Todd, Ph.D., M.D., Assistant Professor in the School of Public Health, University of Minnesota, Minneapolis, and Ruth B. Freeman, R.N., M.A., Associate Professor and Director of the Course in Public Health Nursing in the School of Public Health, University of Minnesota. Cloth. Price, $3. Pp. 530, with 69 illustrations. Philadelphia & London: W. B. Saunders Company, 1946.

Following a rather standardized pattern which has been developed in recent years, this volume is divided into four parts. The first, dealing with environment and prevention of disease, presents nontechnical information on satisfactory control of communicable infections. The chapter on diseases transmitted by sexual intercourse is especially well done. The second section, on reproduction, contains excellent discussion of normal sex life and marriage relations. Consideration of the hygiene of menstruation is well balanced and sensible. In the third part, individual health care, all but one of the five chapters is concerned with growth and health of the infant and child. Presentation of a numbered outline for child guidance, with additional sections on common behavior problems in the child and problems associated with adolescence, offers much helpful information for the average parent. In the last part, home care of illness, detailed instructions are given in tabular order for care of practically any type of patient. Special emphasis is placed on the equipment required for home nursing. The chapter on emergencies is well handled, and although a "pressure points" diagram is included, proper allowance is made for the inability of many lay persons to utilize these. Both the prone pressure and the Eve tilting or rocking methods of artificial respiration are presented. The need for a detailed chapter on home deliveries might be questioned in view of the relatively small percentage of these at present, and also the probability that patients in that category would not be expected to have access to this volume. This book, written primarily for college students, has a much wider application and could be read with benefit by all parents. Many a physician undoubtedly would like to see it in the hands of practical nurses who come under his supervision.

Chemistry of Food and Nutrition. By Henry C. Sherman, Ph.D., Sc.D., Mitchill Professor of Chemistry, Columbia University, New York. Seventh edition. Cloth. Price, $3.75. Pp. 675, with 47 illustrations. New York: Macmillan Company, 1946.

The borders of our knowledge are being pushed forward rapidly, and it is difficult for both the student and the practitioner to keep abreast of the latest developments in this rapidly expanding field. Patients in all walks of life present problems in nutrition. In fact, it has been said that every patient presents a nutritional problem to the keen and well informed observer. For all those interested in the principles of food chemistry and nutrition as a basis for the study of how this branch of science is related to the maintenance of health, this book offers an excellent guide. Although designed primarily for use in the college classroom, it offers to the physician who is interested in both the maintenance of health and the treatment of disease much basically important information. In its latest edition each chapter has been brought up to date or rewritten and two new chapters have been added. The pleasing style of the author, legible type and convenient size make this book both pleasant and instructive reading. The binding is of fine quality and excellent modern design. Indexing has been well done, and there is a useful appendix.

Diagnostik und Therapie der Magen-Darmerkrankungen in zwölf Vorlesungen. Von Dr. med. Fritz Hirschberg. Paper. Price 30 Danish crowns. Pp. 352, with 110 illustrations. Copenhagen: Ejnar Munksgaard, 1941.

This consists of a series of twelve lectures on gastroenterology in which are emphasized the practical phases, while the theoretical ones are given scant consideration. At least one third of the book is devoted to the subject of ulcer, gastritis and the neuroses, the remainder to various intestinal lesions, such as obstruction, carcinoma and infections of the small and large intestine. The subject of x-ray diagnosis is covered very well. Considerable attention is paid to the taking of the history.

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On the other hand, too much stress is laid on inconsequential laboratory tests and too little on newer and more recent methods of treatment, psychosomatic aspects and the use of aluminum compounds in the treatment of ulcers and duodenal ulcer and of the sulfonamides in ulcerative colitis. Nothing is said about diseases of the liver and pancreas. It probably does not fill any urgent need for a new concise and comprehensive textbook on gastroenterology.

Vlivanie antiretikulyarnoy tsitotoksicheskoy syvorotki ("A TS S") na zazhivlenie perelomov. [By] O. A. Bogomolets, [The Influence of the Antireticular Cytotoxic Serum (ACS) upon the Healing of Bone Fractures.] [With English abstract.] Akademiya Nauk Ukrainskoy SSR. Institut Klinicheskoy Fiziologii. Paper. Price, 15 rub. Pp. 195, with illustrations. Kiev: Izdatelstvo Akademii Nauk USSR, 1944.

The volume by O. A. Bogomolets is dedicated to A. A. Bogomolets, the father of the author. It is the report of careful animal experiments and clinical studies on the effect of the antireticular cytotoxic serum on the healing of bone fractures. The first chapter offers a comprehensive review of the existing literature on the antireticular cytotoxic serum, its effect on cancer and sarcoma and on hemopoiesis, the elaboration of immune bodies and the growth of transplants. Chapter 2 deals with the author's experiments in rabbits on the healing of fractures of tubular bones under the influence of the serum. Chapter 3 presents an analysis of clinical material. The thesis of the volume is that the antireticular cytotoxic serum possesses a specific action on the osteoblastic cellular elements of the connective tissue. Small doses of the serum stimulate the growth of the osteoblasts, while large doses have an inhibiting effect. The stimulating action of the serum is not a nonspecific protein reaction, as demonstrated in control experiments utilizing the serum of a nonimmunized animal of the same species. Stimulation of osteoblasts leads in fracture cases to formation of a callus in a shorter than the standard period. This action is particularly striking in cases of retarded or absent fracture healing. In addition to the accelerating effect of the serum on callus formation there was noted likewise a stimulating effect on the whole organism. The serum is administered hypodermically in doses of 0.07 cc. for three doses at intervals of two to three days. The stimulating effect of the serum can be easily estimated by the application of the trypan blue test.

Hypnoanalysis. By Lewis R. Wolberg, M.D., With a foreword by A. Kardiner, M.D., Assistant Clinical Professor of Psychiatry, Columbia University, New York City. Cloth. Price, $4. Pp. 342. New York: Grune & Stratton, 1945.

The quest for shorter and more direct methods of psychotherapy has brought about a renaissance of hypnosis. After its great flowering under Charcot, Liébault and Bernheim and the impetus it received from the earlier writings of Freud, it was Freud and his disciples who were largely responsible for having thrown hypnosis into scientific disrepute. Recently hypnosis has been revived as a scientific tool and a method of therapy. Indeed, modern psychoanalysts have been foremost in revitalizing this ancient therapy. Modern hypnosis has grown far beyond the suggestive-authoritarian "commands" of the French school, and its scope is broader than the "catharsis" of Breuer and Freud. Hypnoanalysis, as Wolberg puts it, "is psychoanalysis performed in a controlled setting." Far from keeping the patient in the catalepsy of old, the new therapy encourages great activity on his part as well as the therapist's. It facilitates free associations, the recovery of buried memories and the overcoming of resistances. Not only is liberal use of dream interpretation made, but dreams are also experimentally induced. The highly flexible technic also includes artificial regression to earlier age levels, automatic writing and drawing. The author aptly illustrates the method and its theoretical implications by the detailed report of the successful hypnoanalysis of a highly talented schizophrenic. It is clear that the method can be handled without danger only by therapists who know hypnotic technic but who also are thoroughly familiar with dynamic psychology and psychopathology. Hardly any other therapy bears as much potential danger for the patient by its intrinsic appeal to the therapist's wish to dominate. Wolberg's presentation is highly recommended for psychiatrists.

Amputation Prosthesis: Anatomic and Physiologic Considerations, with Principles of Alignment and Fitting Designed for the Surgeon and Limb Manufacturer. By Atha Thomas, M.D., F.A.C.S., Associate Professor of Surgery (Orthopedics), University of Colorado School of Medicine, Denver, and Chester C. Haddan, President of the Association of Limb Manufacturers of America. Fabrikold. Price, $8. Pp. 305, with 207 illustrations. Philadelphia, London & Montreal: J. B. Lippincott Company, 1945.

This book is the result of the combined thought and effort of an orthopedic surgeon and a maker of artificial limbs. The surgeon has constantly borne in mind the ultimate functional and cosmetic usefulness of the amputated extremity. Toward this end there is a thorough discussion of sites of election and subsequent after-care to prepare the stump for the fitting and wearing of a prosthesis. The different types of prostheses, their mechanics and their construction are thoroughly described from the point of view of materials, working parts and their relationship to normal joint function. Cineplastic amputations and mechanical prostheses are covered. There is a chapter on rehabilitation of the amputee. This is an excellent and timely treatise, well written and generously illustrated. It is highly recommended to all surgeons who do amputations and should have particular value for those in the armed services and industrial practice.

The Face in Health and Disease. By Max Thorek, M.D., LL.D., D.Sc., Professor of Surgery, Cook County Graduate School of Medicine, Chicago. Fabrikold. Price, $8. Pp. 781, with 636 illustrations. Philadelphia: F. A. Davis Company, 1946.

This unusual volume is a comprehensive study of the face in health and disease. The author did a good job toward carrying out his mission to stimulate the study of the face as a diagnostic aid. The illustrations are excellent and well reproduced. Each chapter is followed by a fairly comprehensive bibliography. The author endeavors to show that many types of pathologic facies are so characteristic of disease entities as to be practically diagnostic. Glandular abnormalities such as acromegaly, hyperthyroidism, myxedema, cretinism and congenital conditions such as mongolism and microcephalic idiocy have typical facies. Pigmentations resulting from jaundice, Addison's disease, anemia and argyria are of practical diagnostic value. Pain, anxiety and neurologic and psychiatric disturbance are all reflected in the face. Lesions of the skin and mucous membranes are well represented. On the whole the illustrations depict the exceptional artistry and skill of the author. The author has amply shown that the study of the facies in certain diseases is of diagnostic value.

Selected Papers from the Royal Cancer Hospital (Free) and the Chester Beatty Research Institute. Vol. III. Published by Order of the Governors of the Royal Cancer Hospital (Free), London. [Reprints.] Cloth. Price, 16s. Pp. (345), with illustrations. London, 1941-1942.

These thirty-nine selected papers, originally published in various journals in 1941 and 1942, have been collected and reprinted in one volume. They represent the selected papers of twenty-nine authors from an institution that has done pioneering work of excellence in the cancer field. The investigations cover a broad field, including radiation and medical physics (biophysics) clinical problems and experimental cancer research concerning the origin and growth of tumors. Many of the investigations are highly technical, of interest mainly to those engaged in cancer research, while others are on a clinical level. These excellent contributions are a tribute to the fine work that the Royal Cancer Hospital (Free) London carried on through the difficult war years.

Organic Preparations. By Conrad Weygand, Professor at the University of Leipzig. Translated and revised from the German text, "Organisch-chemische Experimentierkunst. Teil 2: Reaktionen," 1938. Published and distributed in the public interest with the consent of the Alien Property Custodian under License No. A-6. Cloth. Price, $6. Pp. 534, with 12 illustrations. New York: Interscience Publishers, Inc., 1945.

The second part of the original three volume work "Organisch-Chemische Experimentierkunst" has been translated into English. This volume concerns itself strictly with organic chemical reactions. The reactions are classified as to the formation and fission of various linkages of the carbon atom with other atoms rather than on the more usual presentation based on functional or reactive groups.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

REFRIGERATION FOR POLIOMYELITIS

To the Editor:—Has any scientific work been done on the treatment of the acute stage of anterior poliomyelitis with refrigeration? Would it be feasible to place a patient in an early acute stage in a refrigeration room, keeping the patient warm and giving him transfusions and other empirical adjuvants? Because few cases of poliomyelitis are seen in the cold months of the year, it would appear that a sufficiently cold atmosphere would help keep the active stage at its original level and help prevent further spread such as ascending Landry's paralysis or diaphragmatic paralysis or bulbar types. It is a truism that cold does not attenuate the virus but inhibits its activity. Because of the latter fact, I am interested in this approach to this problem.

Robert Cohen, M.D., Studio City, Calif.

ANSWER.—So far as known, the acute stage of anterior poliomyelitis has not been treated by the method of refrigerating the patient. Such treatment would seem to be of questionable value because the virus retains both its viability and virulence at a temperature of —70 C. Furthermore there is considerable evidence to indicate that, at the time of the acute stage of the disease, most if not all of the nerve cells that will be affected have already been invaded by the virus. Finally there is experimental evidence to indicate that sudden chilling may provoke the more serious forms of the disease in a monkey which would otherwise have escaped with only the nonparalytic type of poliomyelitis.

AMPHETAMINE SULFATE FOR OBESITY

To the Editor:—A statement has recently been made that amphetamine has a twofold action: It decreases appetite, since relaxation of the muscles of the bowel and stomach lessens hunger, and the sensation of hunger is produced by the stomach contractions. It produces a greater capacity for physical exertion by increasing the desire for activity. Does amphetamine destroy the hydrochloric acid in the stomach and, not unlike dinitrophenol, which causes cataracts, is it a dangerous drug to use?

B. F. Gallant, M.D., Babylon, N. Y.

ANSWER.—Amphetamine sulfate has been employed successfully for weight reduction of obese children (Kunstadter, R. H.: Experience with Benzedrine Sulfate in the Management of Obesity in Children, *J. Pediat* **17**:490 [Oct.] 1940) and obese adults. It has been found (Kunstadter, R. H., and Nicheles, Heinrich: Studies on the Effect and Mechanism of Amphetamine Sulfate on Weight Reduction, *Am. J. M. Sc.* **209**:820 [June] 1943) that amphetamine has no effect on appetite (psychic) secretion, and its effects on gastric acidity are relatively small and variable. However, with the usual clinical doses of amphetamine, profound and prolonged inhibition of gastric hunger motility has been seen; that is, typical strong hunger contractions were absent but smaller contractions, not sufficient to evoke the feeling of hunger, prevailed. The periods of inhibition appeared to be sufficiently long to warrant the assumption that three doses of amphetamine a day will probably abolish more or less the feeling of hunger between meals. The other part of the mechanism may be found in the clinical impression that amphetamine made the otherwise slow obese child more alert and more active physically and mentally and rendered it more prone to exert self discipline and will power in eating habits and in following the directions of the physician. No appreciable effects of the drug on the blood pressure or on the basal metabolic rate were noted but benzedrine with thyroid is dangerous in these respects. The dosage may have to be raised during the course of treatment because of tolerance.

TINNITUS FOLLOWING CONCUSSION FROM GUNFIRE

To the Editor:—A man aged 32 complains of constant tinnitus following service in the navy. He believes this is the result of concussion due to guns on ships. Is there anything to give relief?

C. C. Hall, M.D., Maynard, Iowa.

ANSWER.—Tinnitus following exposure to excessive noise is due to injury to the acoustic nerve, frequently with a defect in hearing localized to the region of 4,000 vibrations. There is no effective treatment either medical or surgical for this. With avoidance of further exposure to acoustic trauma, the tinnitus should tend to improve with the passing of time.

INCIDENCE OF LEFT HANDEDNESS

To the Editor:—Has an estimate ever been made of the percentage of the population that is left handed? If so, does the same percentage apply to women?

Wallace E. Hopkins, M.D., Dallastown, Pa.

ANSWER.—The earliest recorded frequency of left handedness appears in the book of Judges. The incidence given is 2.6 per cent. Numerous recent estimations give a somewhat higher percentage. The frequency stated for the general population ranges from 4 per cent up to 7 or 8. Probably the most commonly accepted percentage is about 5.

Newman, Dahlberg and others have reported a higher percentage of left handedness among identical twins than among fraternals. However, von Verschuer and others are not convinced that the difference is significant.

Burt in "The Backward Child" (1937) found a sex difference. He reports 5.8 per cent among normal boys and 3.7 per cent among normal girls. Among what he calls the "backward child" the percentages reported are 9.6 and 6.0 respectively.

TOXICITY OF TETRACHLORETHYLENE

To the Editor:—Tetrachlorethylene has been used in solution with water for the cleaning of gun parts. Every precaution is taken in the mixing and using of this solution to prevent inhalation. A patient using this solution for one month was seen because of fatigue, vertigo, nausea and vomiting. He complained of a drunken feeling after working with the solution all day. Other workers were not affected. Physical examination was essentially negative. The urine and blood count were normal. The patient was improved by removal from this work. Is tetrachlorethylene absorbed through the skin or entirely by inhalation? What are the permanent toxic effects in persons working with this solution over a period of time?

H. L. Method, Lieutenant, U.S.N.R.

ANSWER.—The toxicity of tetrachlorethylene (perchlorethylene, carbon dichloride, ethylene tetrachloride, "perawin," "tetralex") is at about the same level as that of trichlorethylene, which is lower than that of carbon tetrachloride or chloroform. Tetrachlorethylene is 2.8 times more powerful as a narcotic than carbon tetrachloride. The chief port of entry is the respiratory tract; there is only scanty absorption after oral intake in the absence of excessive fats; skin absorption is assumed but not proved. The maximum tolerable exposure for long periods is believed to be about 200 parts per million. The chief sites of action are the central nervous system, the kidneys and the liver. Gastrointestinal involvement is common but not severe. The initial symptoms are stupor, dizziness, excessive perspiration, nausea and vomiting. Individual susceptibility to the action of tetrachlorethylene varies greatly, as indicated in the query. Fatalities have occurred in Europe but are not known in the United States. The fact that this chemical has been safely used extensively in relatively large doses as an anthelmintic administered orally does not minimize the danger following inhalation of vapors in high concentration. Since clinical experience is so limited, unqualified statements cannot be made as to the persistence of damage after severe exposure. However, recovery is probably prompt and complete if survival occurs after the acute manifestations.

TREATMENT OF PETIT MAL EPILEPSY

To the Editor:—A woman aged 25 has had many attacks of petit mal epilepsy and an occasional major convulsive attack. During the last year involuntary urination has occurred during the petit mal attacks although for twelve years there was no incontinence with the attacks. Urinalysis revealed a few white cells and a trace of albumin. The urethra was somewhat narrow but responded promptly to dilations, which relieved the urinary retention of 1 ounce. Pus cells disappeared after small doses of sulfadiazine. What medication is effective in the treatment of minor attacks? Diphenylhydantoin (Dilantin) and the usual sedatives have not been effective. A recent report in The Journal mentioned a new medication. Is this available commercially?

M.D., Iowa.

ANSWER.—Involuntary micturition during petit mal is not uncommon. It doubtless is the result of abnormal nervous discharges in the area of the cerebral cortex which plays a part in micturition. For this reason local bladder conditions are not important in this embarrassing symptom. An electroencephalogram could be obtained as a check on the diagnosis of petit mal. The drug most likely to control petit mal seizures is trimethyloxazolidine dione (trade name tridione-Abbott), starting with a 0.3 Gm. capsule three times a day and, if no rash results, increasing at intervals to a maximum of 2 Gm. a day. The patient should be warned of possible photophobia. The drug is now on the market. Grand mal will need to be controlled by other means, preferably phenobarbital. The report referred to is the article "The Petit Mal Epilepsies: Their Treatment with Tridione" (THE JOURNAL, Dec. 15, 1945, p. 1069).

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